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LEARNING MATHEMATICS

For Primary Levels

3

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Preface

Learning Mathematics Book 3 is a comprehensive workbook that provides students with ample practice on various mathematics question types.

How is this book helpful to students?

Summary of Learning Objectives
Refer to the overview of the topics in the book, which sets the pace for learning each topic.

Work Performance Table
Track your progress record for self-assessment and evaluation.

Formulae Sheet
Check and recall the essential and critical mathematical formulae and information for each topic.

Topical Exercises
Work on these questions to become familiar with various question types.

Enhanced Learning

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Review Papers / Revision Tests
Test yourself! This is the best way to assess your understanding of the topics taught and learnt.

Geniebook. Let Geniebook mark and analyse your answers to receive personalised practice questions! (Refer to first page for more information.)

Non-routine Questions
Understand heuristics better. Try these non-routine questions to develop your thinking and analytical skills.

Additional Activities
Try these activities that test your understanding of mathematical concepts.

Step-by-step Solutions
Learn from the carefully worked out solutions included at the back of the book.

Through this comprehensive workbook, students can gain a thorough understanding of the mathematical concepts, hone their problem-solving skills and develop creative and critical thinking skills. This book will inspire confidence as the student progresses.

The Editorial Team

Contents and Learning Objectives

Geniebook Analyse your answers with Geniebook!
(See first page of book for instructions.)

Enhanced Learning
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Work Performance

	UNIT		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
Numbers within 10 000	1	• Count and write numbers within 10 000 in numerals and words	☐/10	☐/10	☐/10								
		• Understand the place value of numbers within 10 000	☐/40	☐/5	☐/10								
		• Compare and arrange numbers within 10 000	☐/10	☐/10	☐/5	☐/5	☐/5	☐/5	☐/5	☐/5	☐/5	☐/5	☐/8
		• Complete number patterns	☐/16	☐/16	☐/10								
Adding Numbers within 10 000	2	• Add numbers within 10 000	☐/5	☐/10									
		• Perform addition by regrouping ones, tens and hundreds	☐/5	☐/20	☐/5								
		• Add numbers mentally	☐/20	☐/20									
Subtracting Numbers within 10 000	3	• Subtract numbers within 10 000	☐/5	☐/10									
		• Perform subtraction by regrouping ones, tens, hundreds and thousands	☐/20										
		• Subtract numbers mentally	☐/20	☐/20									
Word Problems on Addition and Subtraction	4	• Solve up to two-step word problems related to addition and subtraction	☐/20										
Multiplying Numbers by 6, 7, 8 and 9	5	• Multiply numbers by 6	☐/10	☐/16	☐/18								
		• Multiply numbers by 7	☐/10	☐/16	☐/18								
		• Multiply numbers by 8	☐/10	☐/16	☐/18								
		• Multiply numbers by 9	☐/10	☐/16	☐/18								
		• Multiply numbers by 6, 7, 8 and 9	☐/16										
		• Divide numbers using multiplication facts	☐/8	☐/20	☐/32								
		• Solve word problems related to multiplication and division	☐/16										

	UNIT		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
Multiplying Numbers	6	• Multiply numbers without regrouping	☐/10										
		• Multiply numbers by regrouping ones, tens, hundreds and thousands	☐/5	☐/10	☐/10								
Dividing Numbers	7	• Find quotient and remainder by dividing	☐/10	☐/5	☐/6								
		• Divide numbers without regrouping	☐/12	☐/10	☐/5	☐/7							
		• Divide numbers by regrouping hundreds, tens and ones	☐/10	☐/5	☐/7	☐/10							
Two-Step Word Problems on the Four Operations	8	• Solve two-step word problems related to addition, subtraction, multiplication and division	☐/40										
Money	9	• Add money in dollars and cents	☐/10	☐/10	☐/10	☐/10	☐/10	☐/20	☐/10				
		• Subtract money in dollars and cents	☐/10	☐/10	☐/10	☐/10	☐/10						
		• Solve word problems related to money	☐/20										
Length, Mass and Volume	10	• Express length in kilometres, metres or centimetres	☐/10	☐/10	☐/10	☐/10	☐/5						
		• Read the correct mass on scales	☐/6										
		• Express mass in kilograms and grams	☐/10	☐/10									
		• Read and draw the correct volume in measuring beakers	☐/6	☐/6									
		• Express volume in litres and millilitres	☐/10	☐/10									
		• Solve word problems related to length, mass and volume	☐/26										
Bar Graphs	11	• Read and interpret data from bar graphs	☐/34										
Fractions	12	• Recognise and understand equivalent fractions	☐/5	☐/9	☐/10	☐/20							
		• Express a fraction in its simplest form	☐/20										
		• Compare and arrange fractions	☐/6	☐/5	☐/5	☐/5	☐/5						
		• Add and subtract fractions	☐/10	☐/10	☐/8								

	UNIT		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
Time	13	• Read and write the correct time	☐/10	☐/12									
		• Express time in minutes or hours and minutes	☐/10	☐/5	☐/10								
		• Find duration between two different times	☐/10										
		• Find the starting time or ending time	☐/10	☐/10									
		• Solve word problems related to time	☐/16										
Angles	14	• Identify angles and right angles	☐/12	☐/6									
Perpendicular and Parallel Lines	15	• Identify and draw perpendicular lines	☐/6	☐/18	☐/12	☐/6							
		• Identify and draw parallel lines	☐/6	☐/11	☐/8	☐/6							
Area and Perimeter	16	• Find the area and perimeter of figures in square units, cm^2 and m^2	☐/10	☐/15	☐/5	☐/10	☐/5	☐/24	☐/5				
		• Use the formula to find the area of figures	☐/10										
		• Solve word problems related to area and perimeter	☐/6										

Formulae Sheet

Unit 1 Numbers within 10 000

4-digit numbers can be written in this manner:

Example: Write 8945 in words.
eight thousand, nine hundred and forty-five

Place value

In a 4-digit number, each digit is in a different place and has a different value. The place value will help us identify the particular place such as thousands, hundreds, tens or ones of a digit and its value.

Example: In 3785,
– the digit 3 is in the **thousands** place.
– the digit 3 stands for **3000**.
– the value of the digit 3 is **3000**.

Comparing numbers

Start comparing the two numbers from the thousands place.

- When one number is bigger than the other, use the words **greater than** to describe it.

Example: 8945 is greater than 3785.

- When one number is smaller than the other, use the words **smaller than** to describe it.

Example: 3785 is smaller than 8945.

Order and Pattern

When arranging a set of numbers in order,

- take note if the order must begin with the greatest or the smallest,
- compare the place value of the numbers,
- arrange these numbers in the correct order.

For number pattern,

- take note if the number pattern is in an increasing or a decreasing order,
- find the difference between two consecutive numbers,
- apply the difference to find the unknown number.

'More than' and 'Less than'

Substitute the words **more than** with an addition sign (+).

Example: What is 1000 more than 6007?
6007 + 1000 = 7007

Similarly, substitute the words **less than** with a subtraction sign (–).

Example: What is 1000 less than 6007?
6007 – 1000 = 5007

Unit 2 Adding Numbers within 10 000

The word **sum** means addition.

Adding without regrouping

- Add the digits in the ones place first.
- Add the digits in the tens place.
- Add the digits in the hundreds place.
- Add the digits in the thousands place.

Example:

$$\begin{array}{r} 1\,3\,8\,6 \\ +\,2\,0\,0\,1 \\ \hline 3\,3\,8\,7 \end{array}$$

Adding with regrouping

- Add the digits in the ones place first. Regroup the ones if there are more than 10 ones.
- Add the digits in the tens place. Add another ten if there is a regrouping of ones. Regroup the tens if there are more than 10 tens.
- Add the digits in the hundreds place. Add another hundred if there is a regrouping of tens. Regroup the hundreds if there are more than 10 hundreds.
- Add the digits in the thousands place. Add another thousand if there is a regrouping of hundreds.

Example:

$$\begin{array}{r} {\scriptstyle 1\ 1\ 1\ \ } \\ 2\,7\,9\,4 \\ +\,5\,6\,3\,7 \\ \hline 8\,4\,3\,1 \end{array}$$

Unit 3 Subtracting Numbers within 10 000

The word **difference** means subtraction.

Subtracting without regrouping

- Subtract the digits in the ones place first.
- Subtract the digits in the tens place.
- Subtract the digits in the hundreds place.
- Subtract the digits in the thousands place.

Example:

$$\begin{array}{r} 9\,8\,7\,6 \\ -\,2\,3\,4\,5 \\ \hline 7\,5\,3\,1 \end{array}$$

Subtracting with regrouping

- Subtract the digits in the ones place first. If this is not possible, then regroup the tens and ones.
- Subtract the digits in the tens place. If this is not possible, then regroup the hundreds and tens.
- Subtract the digits in the hundreds place. Regroup the thousands and hundreds if needed.
- Subtract the digits in the thousands place.

Example:

$$\begin{array}{r} {\scriptstyle 8\ 10\ 11\ 13\ \ } \\ 9\,\not{1}\,\not{2}\,\not{3} \\ +\,7\,6\,5\,4 \\ \hline 1\,4\,6\,9 \end{array}$$

Unit 4 Word Problems on Addition and Subtraction

Below are suggested steps to solve routine mathematical problems.

1. First, read and understand the problem.
2. Look for keywords to determine whether to add or subtract.
3. Draw models to help you understand the problem better.
4. Write the number sentences.
5. Do your working on the right side of the space.
6. Remember to write your answers in the number sentences.
7. Write a statement to answer the word problem. You can underline the final answer in the statement.

Unit 5 Multiplying Numbers by 6, 7, 8 and 9

Below are the multiplication tables of 6, 7, 8 and 9.

×	6	7	8	9
1	6	7	8	9
2	12	14	16	18
3	18	21	24	27
4	24	28	32	36
5	30	35	40	45
6	36	42	48	54
7	42	49	56	63
8	48	56	64	72
9	54	63	72	81
10	60	70	80	90
11	66	77	88	99
12	72	84	96	108

Unit 6 Multiplying Numbers

The terms in multiplication are:

multiplicand × multiplier = product

Example: 12 × 4 = 48

Multiplying without regrouping

- Multiply the digit in the ones place by the multiplier first.
- Multiply the digit in the tens place by the multiplier.
- Multiply the digit in the hundreds place by the multiplier.

Example:

$$\begin{array}{r} 123 \\ \times \quad 2 \\ \hline 246 \end{array}$$

Multiplying with regrouping

- Multiply the digit in the ones place by the multiplier first. Regroup the ones if there are more than 10 ones.
- Multiply the digit in the tens place by the multiplier. Remember to add the tens from the regrouping of ones if there is any. Regroup the tens if there are more than 10 tens.
- Multiply the digit in the hundreds place by the multiplier. Remember to add the hundreds from the regrouping of tens if there is any. Regroup the hundreds if there are more than 10 hundreds.

Example:

$$\begin{array}{r} {\scriptstyle 1\ 2}\ \ \\ 345 \\ \times \quad 4 \\ \hline 1380 \end{array}$$

Unit 7 Dividing Numbers

The terms in division are:

dividend ÷ divisor = quotient and remainder

When the dividend can be divided equally by the divisor, there will be no remainder.

Example: 48 ÷ 4 = 12

When the dividend cannot be divided equally by the divisor, there will be a remainder. The remainder will be less than the divisor.

Example: 50 ÷ 4 = 12 R 2

In order to do division, you have to know the multiplication table by heart.

Division without regrouping

- Divide the digit in the hundreds place by the divisor first.
- Divide the digit in the tens place by the divisor.
- Divide the digit in the ones place by the divisor.

Example:

$$\begin{array}{r} 123 \\ 2\overline{)246} \\ 2 \\ \hline 4 \\ 4 \\ \hline 6 \\ 6 \\ \hline 0 \end{array}$$

Division with regrouping

- Divide the digit in the hundreds place by the divisor first. Find the remainder of hundreds if there is any.
- Regroup the remainder of hundreds to tens. Add up all tens. Divide the tens by the divisor. Find the remainder of ones if there is any.
- Regroup the remainder of tens to ones. Add up all ones. Divide the ones by the divisor. Find the remainder of ones if there is any.

Example:

$$\begin{array}{r} 185 \\ 3\overline{)555} \\ 3 \\ \hline 25 \\ 24 \\ \hline 15 \\ 15 \\ \hline 0 \end{array}$$

Odd numbers are numbers that will have a remainder of 1 when divided by 2.

Examples of odd numbers: 1, 3, 5, 7, 9, 11, ...

Even numbers are numbers that will have no remainder when divided by 2.

Examples of even numbers: 2, 4, 6, 8, 10, 12, ...

Unit 8 Two-step Word Problems on the Four Operations

Below are suggested steps to solve routine mathematical problems.

1. First, read and understand the problem.
2. Look for keywords to determine whether to multiply or divide.
3. Draw models to help you understand the problem better.
4. Write the number sentences.
5. Do your working on the right side of the space.
6. Remember to write your answers in the number sentences.
7. Write a statement to answer the word problem. You can underline the final answer in the statement.

Unit 9 Money

Adding Money

There are three ways to add money.

❶ Add the dollars first.
Add the cents next.

Add the cents to the dollars.

Example: What is \$10.20 + \$28.35?

\$10 + \$28 = \$38
20¢ + 35¢ = 55¢
\$38 + 55¢ = **\$38.55**

❷ Round up one of the addends to the nearest dollar. Add the other addend and the round addend. Subtract the difference between the round addend and the other addend from the sum.

Example: What is \$32.50 + \$0.90?

\$32.50 + \$1 = \$33.50
\$33.50 – 10¢ = **\$33.40**

❸ Add by formal algorithm.

Example: What is \$61.80 + \$12.70?

$$\begin{array}{r} \overset{1}{\$}61.80 \\ +\$12.70 \\ \hline \$74.50 \end{array}$$

Make sure the dollar sign (\$) and decimal point (.) align. If one of the addends does not have cents, add two zeros after the decimal point.

Subtracting Money

There are three ways to subtract money.

❶ Subtract the dollars first.
Subtract the cents next.
Add the cents to the dollars.

Example: What is \$50.90 – \$12.60?

\$50 – \$12 = \$38
90¢ – 60¢ = 30¢
\$38 + 30¢ = **\$38.30**

❷ Round up one of the subtraheads to the nearest dollar. Subtract the round subtrahead from the other subtrahead. Add the difference between the round subtrahead and the other subtrahead to the result.

Example: What is \$49.60 – \$8.70?

\$49.60 – \$9 = \$40.60
\$40.60 + 30¢ = **\$40.90**

❸ Add by formal algorithm.

Example: What is \$88.00 – \$54.60?

$$\begin{array}{r} \$8\overset{7}{8}.\overset{10}{0}0 \\ -\$54.60 \\ \hline \$33.40 \end{array}$$

Make sure the dollar sign (\$) and decimal point (.) align. If one of the subtraheads does not have cents, add two zeros after the decimal point.

Unit 10 Length, Mass and Volume

Length

Units of measurement: kilometres (km), metres (m) and centimetres (cm)

1 km = 1000 m
1 m = 100 cm

Mass

Units of measurement: kilograms (kg) and grams (g)
1 kg = 1000 g

When reading the scale on a weighing machine:
- find how many grams or kilograms each small marking stands for,
- note the marking that the needle points to.

The marking pointed by the needle shows the mass of an item on a weighing machine.

Volume

Units of measurement: litres (*l*) and millilitres (m*l*)
1 *l* = 1000 m*l*

Capacity is the total amount of water that a container can hold
Volume is the amount of water in a container.

When reading the scale on a measuring container,
- find how many litres or millilitres each small marking stands for,
- note the water level that coincides with the marking on the measuring container.

The marking that coincides with the water level shows the capacity or volume of water in the measuring container.

Below is a suggested procedure when solving word problems related to length, mass and volume.
1. Read the word problem carefully.
2. Find what you are supposed to solve in the word problem.
3. Draw model(s) for better understanding.
4. Write number sentence. You have to write two number sentences when working on a two-step word problem.
5. Do the formal algorithm on the right side of the space.
6. Write a statement to answer the question in the word problem. You can underline the final answer in the statement.

Unit 11 Bar Graphs

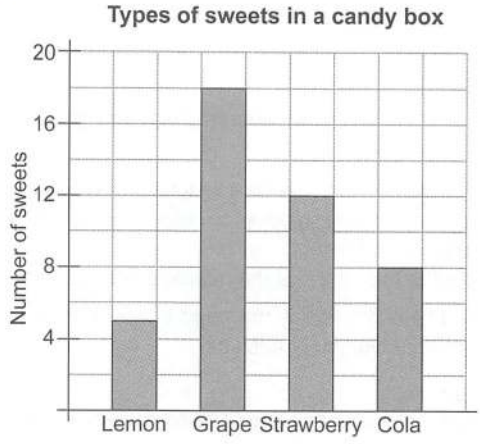
A bar graph is a single chart that displays bars representing certain values along its axis.

Bar graph is useful as it computes data or information neatly, which helps in easy comparison and problem solving.

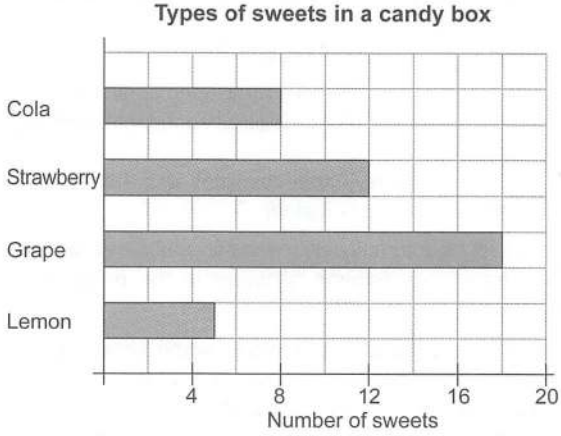
When interpreting data from bar graphs, we have to take note of the scale in the axis.

Two types of bar graphs are introduced in this book. They are, namely, vertical and horizontal bar graphs.

An example of vertical bar graph is shown below.



An example of horizontal bar graph is shown below.



Unit 12 Fractions

Equivalent fractions are fractions that have the same value.

Examples: $\frac{1}{3}$, $\frac{2}{6}$, $\frac{3}{9}$ and $\frac{4}{12}$

In order to find an equivalent fraction, we have to multiply both numerator and denominator of a fraction by the same number.

Example: $\frac{3\times2}{5\times2} = \frac{6}{10}$

Comparing fractions

- When fractions have the same denominator, just compare their numerators.
  The greater the numerator, the greater the fraction.

Example: $\frac{2}{3}$ is greater than $\frac{1}{3}$.

- When fractions have the same numerator, just compare their denominators.
  The greater the denominator, the smaller the fraction.

Example: $\frac{1}{3}$ is smaller than $\frac{1}{2}$.

- When fractions do not have the same numerator or denominator, make these fractions equivalent first.
  It is easier to compare when the fractions have the same numerator or denominator.

Example: Compare $\frac{2}{3}$ and $\frac{3}{4}$.

$\frac{2\times4}{3\times4} = \frac{8}{12}$

$\frac{3\times3}{4\times3} = \frac{9}{12}$

$\frac{9}{12}$ is greater than $\frac{8}{12}$.

So, $\frac{3}{4}$ is greater than $\frac{2}{3}$.

Adding fractions

1. Make sure all addends have the same denominator. If they do not, find the equivalent fractions.
2. Add all numerators of each fraction to get the result.
3. Express the final fraction in its simplest form if required.

Example: $\frac{1}{2} + \frac{1}{3} = \frac{1\times3}{2\times3} + \frac{1\times2}{3\times2}$

$= \frac{3}{6} + \frac{2}{6}$

$= \frac{5}{6}$

Subtracting fractions

1. Make sure all subtraheads have the same denominator. If they do not, find the equivalent fractions.
   A whole (1) can be expressed in equivalent fractions like $\frac{2}{2}$, $\frac{3}{3}$, $\frac{4}{4}$, $\frac{5}{5}$, $\frac{6}{6}$, $\frac{7}{7}$, $\frac{8}{8}$, $\frac{9}{9}$, $\frac{10}{10}$, $\frac{11}{11}$ and $\frac{12}{12}$.
2. Subtract all numerators of each fraction to get the result.
3. Express the final fraction in its simplest form if required.

Example: $\frac{1}{2} - \frac{1}{3} = \frac{1\times3}{2\times3} - \frac{1\times2}{3\times2}$

$= \frac{3}{6} - \frac{2}{6}$

$= \frac{1}{6}$

Unit 13 Time

Telling time

When the minute hand points to/before 6 on the face of a clock, use the word '**past**'.
When using the word 'past', you have to count the minutes that have past a certain hour.

Example: 

10.20 is **20 minutes past 10**.

When the minute hand has moved past 6 on the face of a clock, use the word '**to**'.
When using the word 'to', you have to count the minutes needed to move to the next hour.

Example: 

12.45 is **15 minutes to 1**.

Converting hours and minutes

1 hour = 60 minutes

- When converting hours to minutes, multiply the number of hours by 60.
  Example: 7 h = 7 × 60 min = 420 min
- When converting minutes to hours, divide the number of hours by 60.
  Example: 540 min = 540 min ÷ 60 min = 9 h

Adding time

1. Add the minutes. If the total is more than 60, regroup the hours and minutes.
2. Add the hours. Remember to add an hour from the regrouping if there is any.

Example: 1 h 25 min + 2 h 40 min = 4 h 5 min

25 min + 40 min = 65 min
= 1 h 5 min

1 h + 2 h + 1 h = 4 h

Subtracting time

1. Subtract the minutes. If this is not possible, regroup the hours and minutes.
2. Subtract the hours.

Example: 4 h 5 min – 1 h 25 min = 2 h 40 min

4 h 5 min = 3 h 65 min

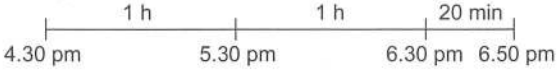
65 min – 25 min = 40 min

3 h – 1 h = 2 h

Finding the duration

A timeline is used to find the duration of time in minutes and hours. It can also be used to find the time before/ after a certain time.

Example:

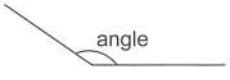


The duration of time from 4.30 pm to 6.50 pm is **2 h 20 min.**
2 h 20 min before 6.50 pm is **4.30 pm**.
2 h 20 min after 4.30 pm is **6.50 pm**.

Unit 14 Angles

When two straight lines meet, an angle is formed. Hence, an angle is the amount of turning between these two lines.

Example:



A right angle is formed when a vertical line meets a horizontal line.

Symbol: ⌝

Example:

Unit 15 Perpendicular and Parallel Lines

When two straight lines meet and form a right angle, these two lines are known as **perpendicular lines**.

Symbol: ⊥

Examples:

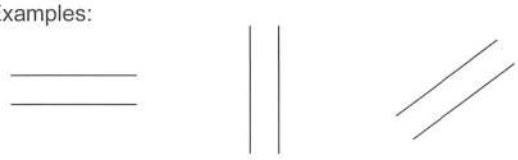
When drawing perpendicular lines,

1. draw two straight lines with a ruler,
2. make sure a right angle is formed when these two lines meet.

When two straight lines are equal distance from each other and do not meet, they are known as **parallel lines**.

Symbol: //

Examples:



When drawing parallel lines:

1. draw two straight lines with a ruler,
2. make sure one line is equal distance from the other line at all points.

Unit 16 Area and Perimeter

Area

Area is defined as the size of a surface.
Units of measurement: square centimetres (cm^2) and square metres (m^2)

Finding area of a figure in a grid of 1-cm squares

Count the number of squares that make up the figure.

Finding area of a rectangle

Area = Length × Breadth
Make sure the units of measurement for both length and breadth are the same.

Finding area of a square

Area = Length × Length
Make sure the units of measurement for all four sides are the same.

Perimeter

Perimeter is defined as the distance around a figure or an object.

Units of measurement: centimetres (cm) and metres (m)

Finding perimeter of a figure in a grid of 1-cm squares

Count the number of lines that make up the figure.

Finding perimeter of a rectangle

Total up the length and breadth of its four sides.

Finding perimeter of a square

Total up the length of its four sides.

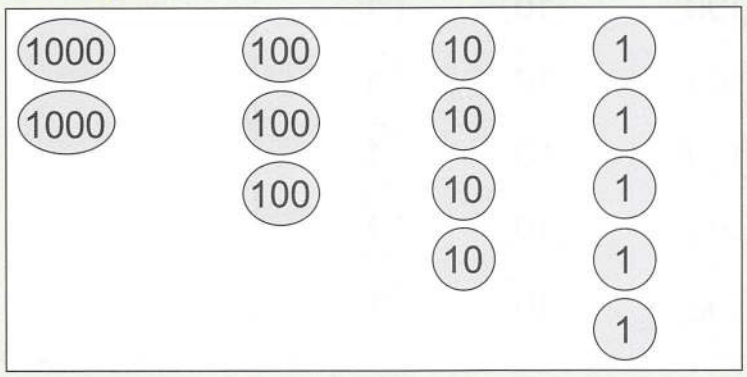
Alternatively, we can multiply the length of one side by 4 as all sides of a square are equal.

1 Numbers within 10 000

Count and write numbers within 10 000 in numerals and words

(A) Write the numbers on the lines provided. **[10 marks]**

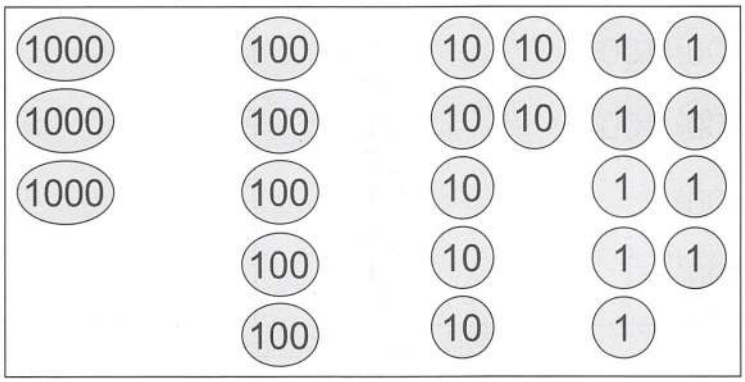
Example:



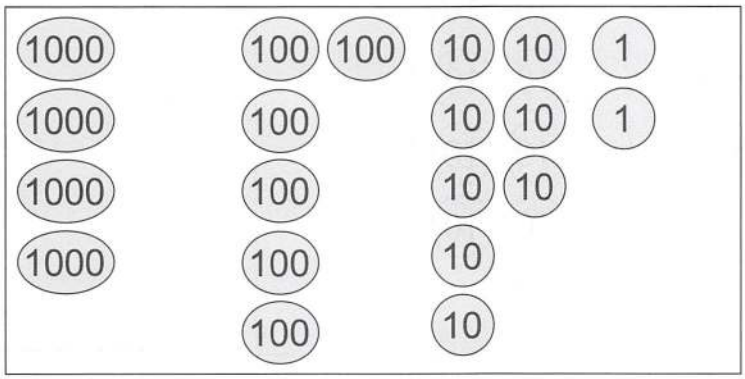
1000, ... 2000, ...
2100, ... 2200, ...
2300, ... 2310, ...
2320, ... 2330, ...
2340, ... 2341,
2342, 2343,
2344, 2345

2345

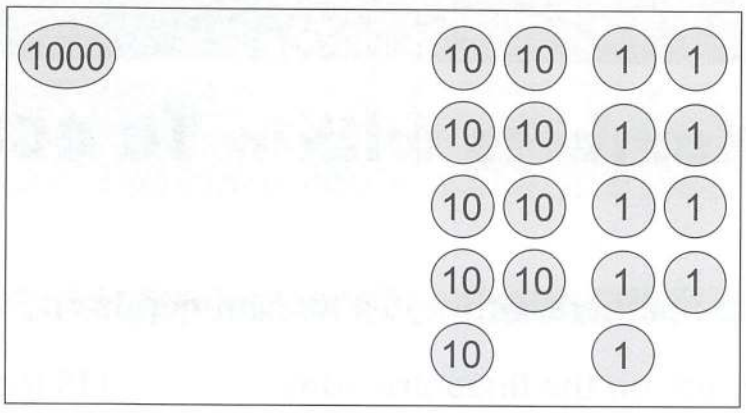
1.



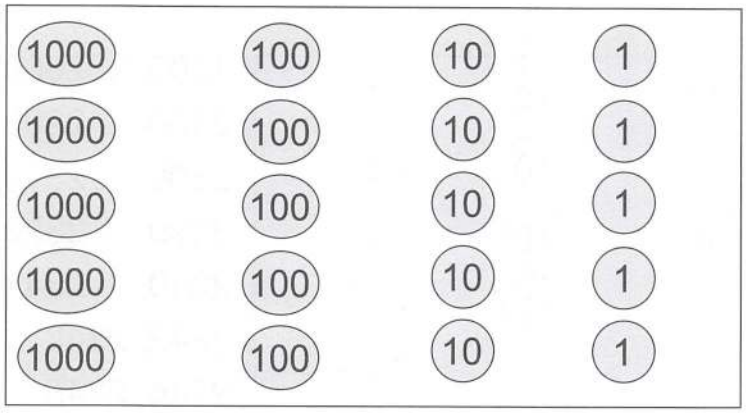
2.



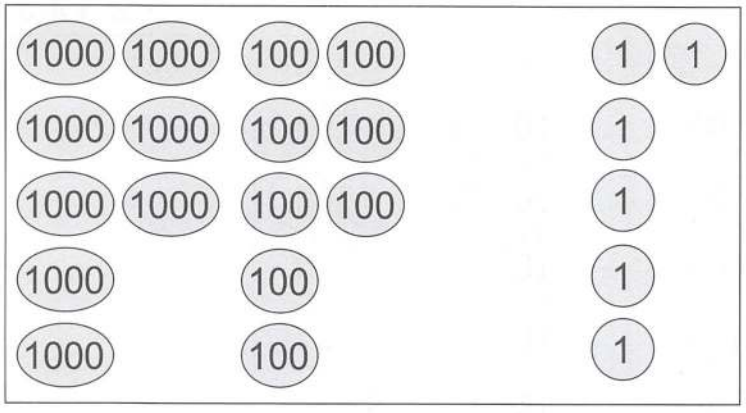
3.



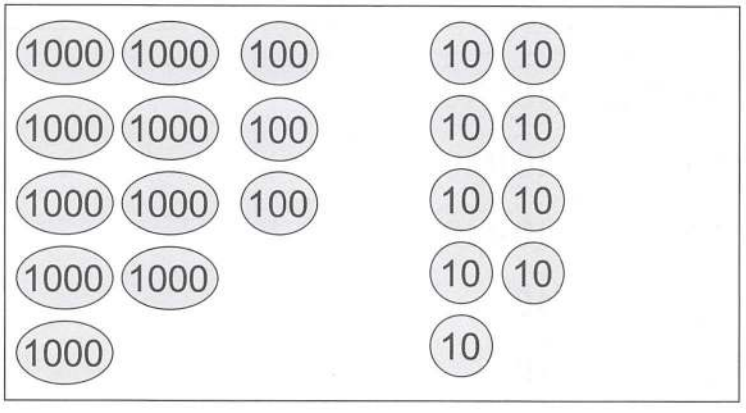
4.



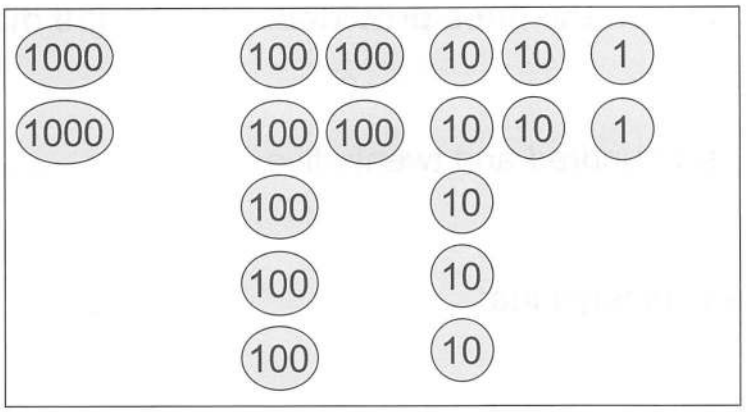
5.



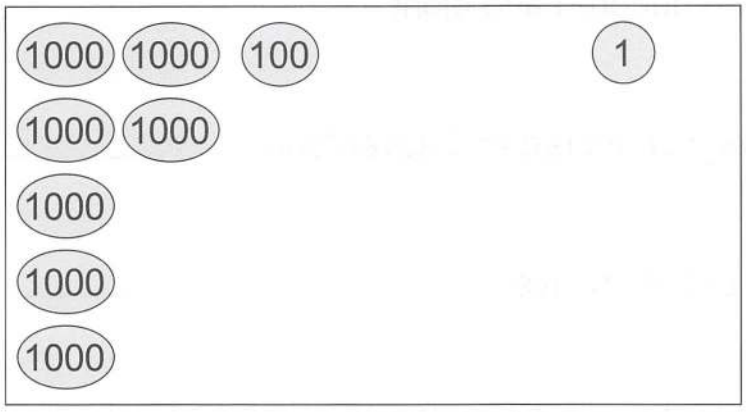
6.



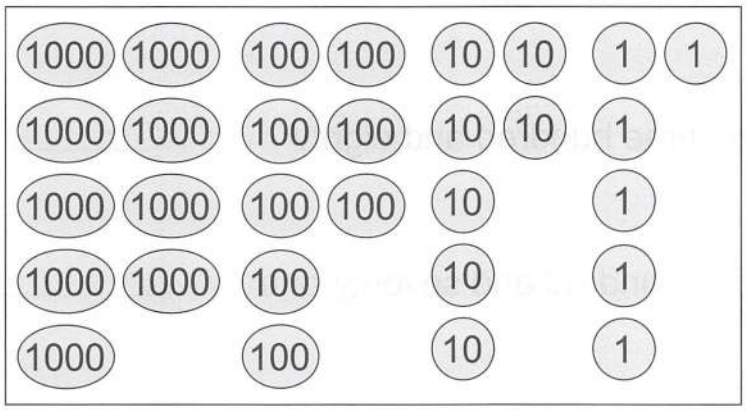
7.



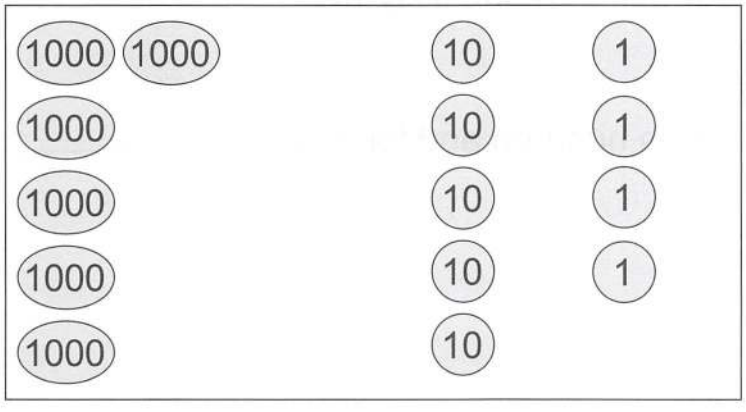
8.



9.



10.



(B) Write the numbers on the lines provided. **[10 marks]**

1. three thousand, six hundred and twenty-five _____

2. nine thousand and ninety-nine _____

3. six thousand, two hundred and eight _____

4. five thousand, eight hundred and seventeen _____

5. eight thousand and thirty-five _____

6. four thousand, one hundred and fifty-six _____

7. seven thousand, three hundred and eighty _____

8. two thousand, five hundred and seventy-one _____

9. one thousand, four hundred and sixty-two _____

10. nine thousand, seven hundred and forty-three _____

(C) Write the following numbers in words. [10 marks]

1. 9693 _____

2. 4313 _____

3. 8440 _____

4. 7015 _____

5. 6505 _____

6. 1289 _____

7. 5974 _____

8. 3721 _____

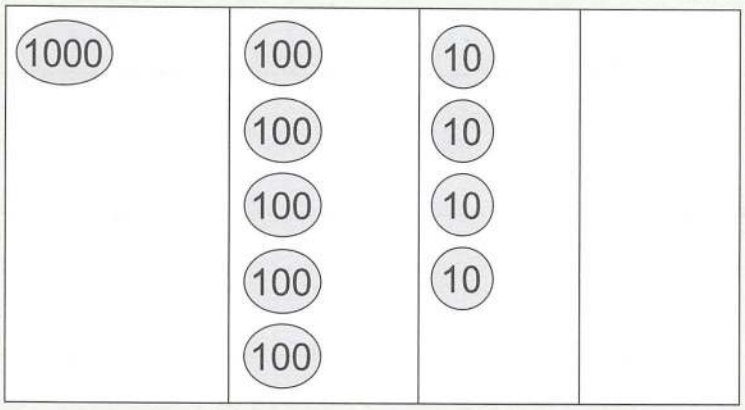
9. 2867 _____

10. 9152 _____

Understand the place value of numbers within 10 000

(A) Fill in each blank with the correct answer. **[40 marks]**

Example:



(a)

Thousands	Hundreds	Tens	Ones
1	5	4	0

(b) The digit 1 is in the thousands place.

The digit 5 is in the hundreds place.

The digit 4 is in the tens place.

The digit 0 is in the ones place.

(c) The value of the digit 1 is 1000.

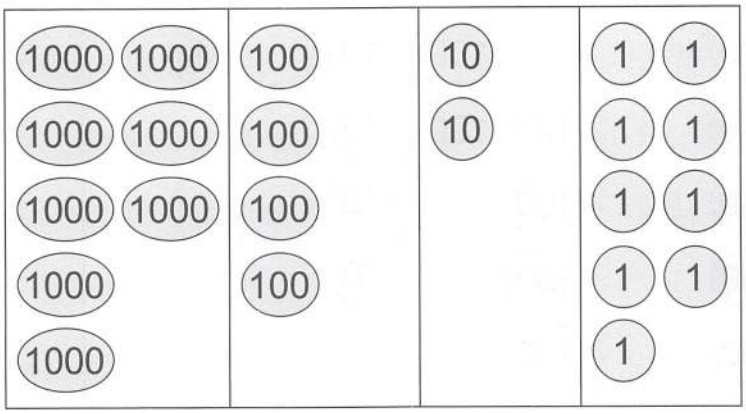
The value of the digit 5 is 500.

The value of the digit 4 is 40.

The value of the digit 0 is 0.

1540 = 1000 + 500 + 40 + 0

1.



(a)

Thousands	Hundreds	Tens	Ones

(b) The digit _____ is in the thousands place.

The digit _____ is in the hundreds place.

The digit _____ is in the tens place.

The digit _____ is in the ones place.

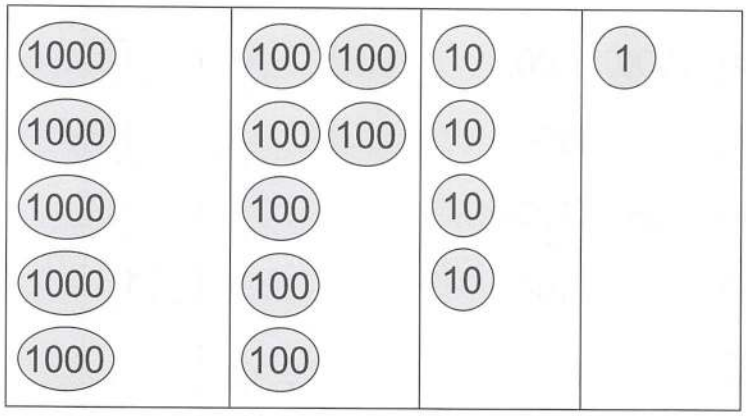
(c) The value of the digit 8 is _____.

The value of the digit 4 is _____.

The value of the digit 2 is _____.

The value of the digit 9 is _____.

2.



(a)

Thousands	Hundreds	Tens	Ones

(b) The digit _____ is in the thousands place.

The digit _____ is in the hundreds place.

The digit _____ is in the tens place.

The digit _____ is in the ones place.

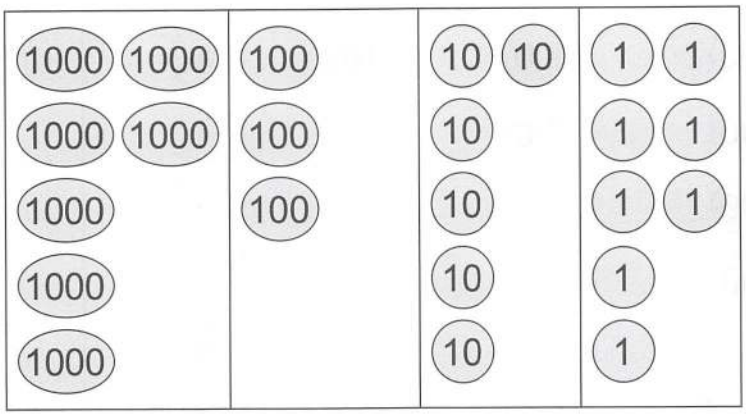
(c) The value of the digit 5 is _____.

The value of the digit 7 is _____.

The value of the digit 4 is _____.

The value of the digit 1 is _____.

3.



(a)

Thousands	Hundreds	Tens	Ones

(b) The digit _____ is in the thousands place.

The digit _____ is in the hundreds place.

The digit _____ is in the tens place.

The digit _____ is in the ones place.

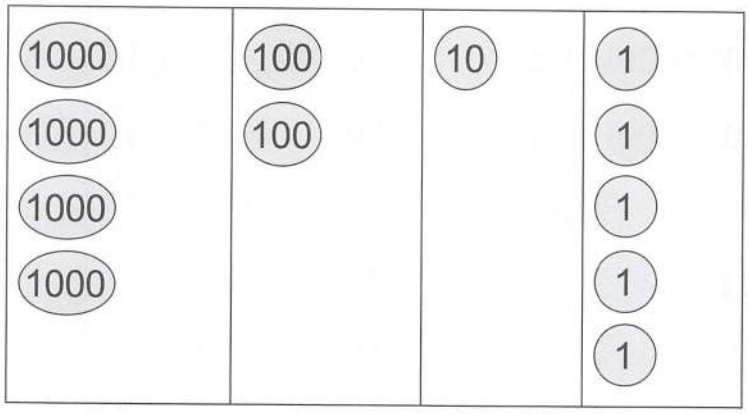
(c) The value of the digit 7 is _____.

The value of the digit 3 is _____.

The value of the digit 6 is _____.

The value of the digit 8 is _____.

4.



(a)

Thousands	Hundreds	Tens	Ones

(b) The digit _____ is in the thousands place.

The digit _____ is in the hundreds place.

The digit _____ is in the tens place.

The digit _____ is in the ones place.

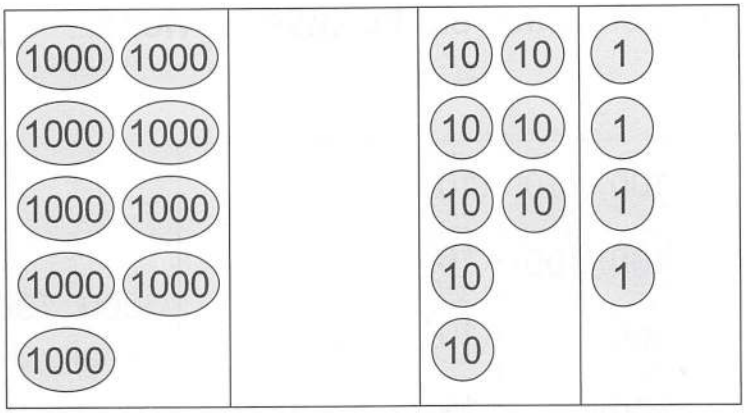
(c) The value of the digit 4 is _____.

The value of the digit 2 is _____.

The value of the digit 1 is _____.

The value of the digit 5 is _____.

5.



(a)

Thousands	Hundreds	Tens	Ones

(b) The digit _____ is in the thousands place.

The digit _____ is in the hundreds place.

The digit _____ is in the tens place.

The digit _____ is in the ones place.

(c) The value of the digit 9 is _____.

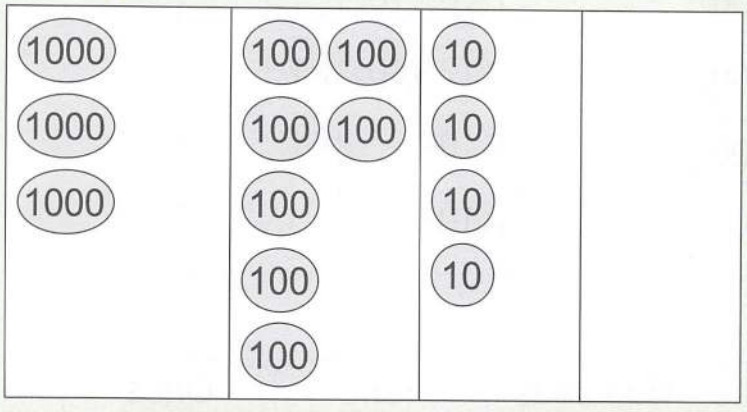
The value of the digit 0 is _____.

The value of the digit 8 is _____.

The value of the digit 4 is _____.

(B) Write the correct values on the lines provided. [5 marks]

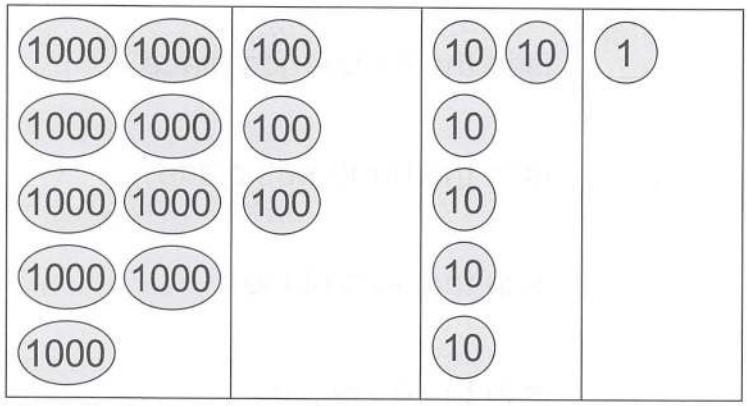
Example:



3000, 700, 40 and 0 make 3740.

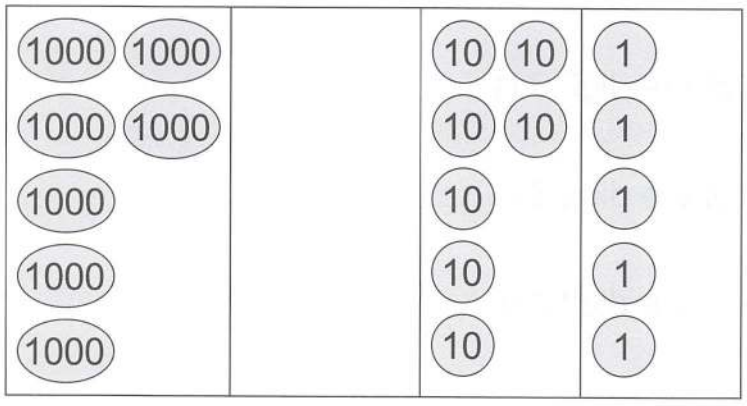
3000 + 700 + 40 + 0 = **3740**

1.



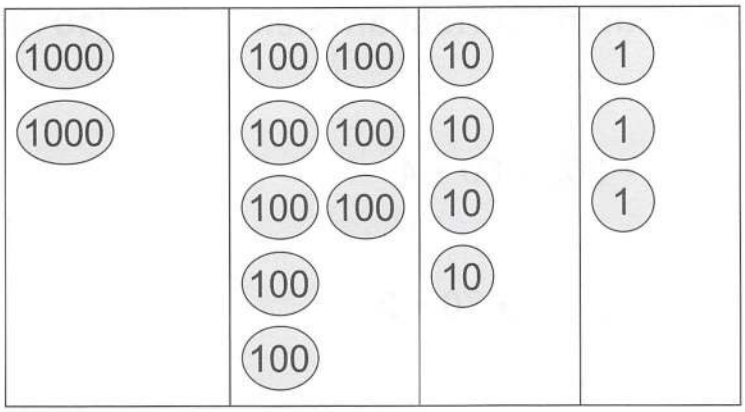
9000 + 300 + 60 + 1 = _____

2.



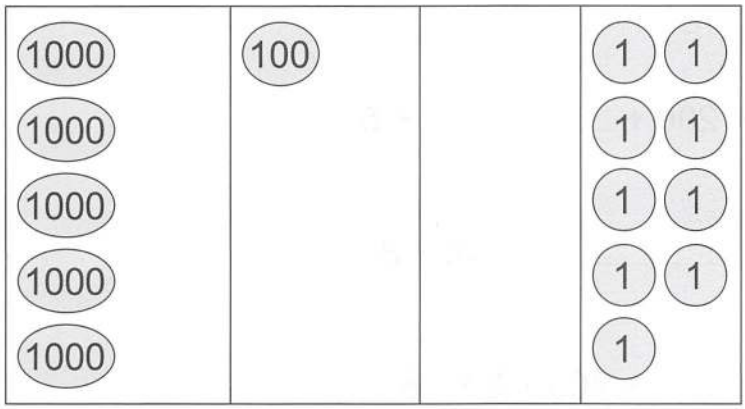
7000 + 0 + 70 + 5 = _____

3.



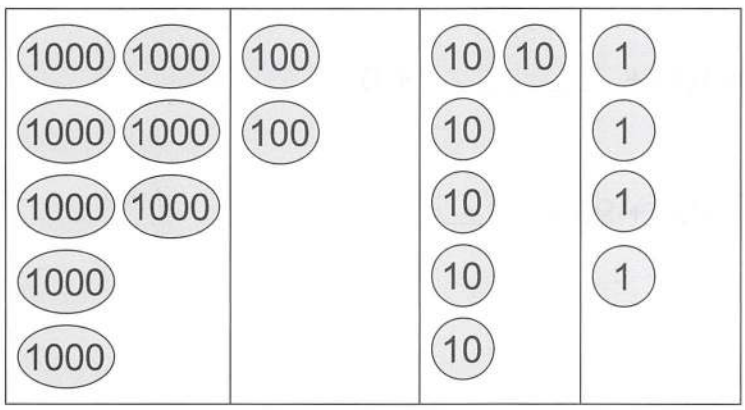
2000 + 800 + 40 + 3 = _____

4.



5000 + 100 + 0 + 9 = _____

5.



8000 + 200 + 60 + 4 = _____

(C) Fill in each blank with the correct answer. [10 marks]

1. 6384 = _____ + 300 + 80 + 4

2. 1072 = 1000 + _____ + 70 + 2

3. 4951 = 4000 + 900 + _____ + 1

4. 9503 = 9000 + 500 + 0 + _____

5. 3245 = 3000 + 200 + _____ + 5

6. 5818 = 5000 + _____ + 10 + 8

7. 2756 = _____ + 700 + 50 + 6

8. 8668 = 8000 + _____ + 60 + 8

9. 7120 = 7000 + 100 + _____ + 0

10. 6499 = 6000 + 400 + 90 + _____

Compare and arrange numbers within 10 000

(A) Fill in each blank with the correct answer. **[10 marks]**

Example:

6456	1000 1000 1000 1000 1000 1000	100 100 100 100	10 10 10 10 10	1 1 1 1 1 1
6656	1000 1000 1000 1000 1000 1000	100 100 100 100 100 100	10 10 10 10 10	1 1 1 1 1 1

6656 is greater than **6456**.

6456 is smaller than **6656**.

First, we compare the thousands. They are the same.
Next, we compare the hundreds. 6 is greater than 4.
So, 6656 is greater than 6456.

1.

5178	1000, 1000, 1000, 1000, 1000	100	10, 10, 10, 10, 10	1, 1, 1, 1, 1
3871	1000, 1000, 1000	100, 100, 100, 100, 100, 100, 100	10, 10, 10, 10, 10, 10, 10	1

_____ is greater than _____.

_____ is smaller than _____.

2.

2092	1000 1000		10 10 10 10 10 10 10 10 10	1 1
2129	1000 1000	100	10 10	1 1 1 1 1 1 1 1 1

_____ is greater than _____.

_____ is smaller than _____.

3.

7374	1000 1000 1000 1000 1000 1000 1000	100 100 100	10 10 10 10 10 10 10	1 1 1 1
7347	1000 1000 1000 1000 1000 1000 1000	100 100 100	10 10 10 10	1 1 1 1 1 1 1

_____ is greater than _____.

_____ is smaller than _____.

4.

7650	1000 1000 1000 1000 1000 1000 1000	100 100 100 100 100 100	10 10 10 10 10	
8605	1000 1000 1000 1000 1000 1000 1000 1000	100 100 100 100 100 100		1 1 1 1 1

_____ is greater than _____.

_____ is smaller than _____.

5.

4949	1000 1000 1000 1000	100 100 100 100 100 100 100 100 100	10 10 10 10	1 1 1 1 1 1 1 1 1
4944	1000 1000 1000 1000	100 100 100 100 100 100 100 100 100	10 10 10 10	1 1 1 1

_____ is greater than _____.

_____ is smaller than _____.

(B) Fill in each blank with the correct answer. [10 marks]

Example:

Thousands	Hundreds	Tens	Ones
6	4	4	7
6	4	7	4

6447 is smaller than **6474**.

First, we compare the thousands. They are the same.
Next, we compare the hundreds. Again, they are the same.
Now, we compare the tens. 4 is smaller than 7.
So, 6447 is smaller than 6474.

1.

Thousands	Hundreds	Tens	Ones
8	2	9	4
8	9	4	2

_____ is greater than _____.

2.

Thousands	Hundreds	Tens	Ones
1	7	0	4
1	0	4	7

_____ is smaller than _____.

3.

Thousands	Hundreds	Tens	Ones
3	0	1	0
3	0	0	1

_____ is greater than _____.

4.

Thousands	Hundreds	Tens	Ones
4	1	9	6
8	1	9	6

_____ is smaller than _____.

5.

Thousands	Hundreds	Tens	Ones
5	7	3	7
5	3	7	7

_____ is greater than _____.

6.

Thousands	Hundreds	Tens	Ones
6	3	0	8
6	0	8	3

_____ is smaller than _____.

7.

Thousands	Hundreds	Tens	Ones
9	8	1	5
9	8	5	1

_____ is greater than _____.

8.

Thousands	Hundreds	Tens	Ones
7	2	5	0
7	2	0	5

_____ is smaller than _____.

9.

Thousands	Hundreds	Tens	Ones
2	6	4	2
2	4	6	2

_____ is greater than _____.

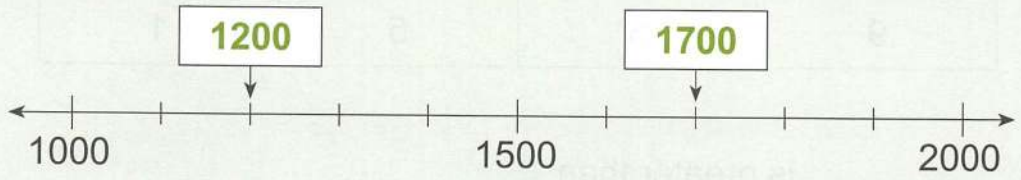
10.

Thousands	Hundreds	Tens	Ones
3	1	7	2
3	2	1	7

_____ is smaller than _____.

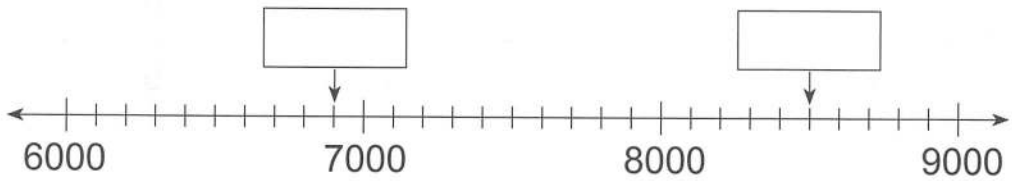
(C) Fill in each blank with the correct answer. [10 marks]

Example:



1700 is greater than 1200.

1.

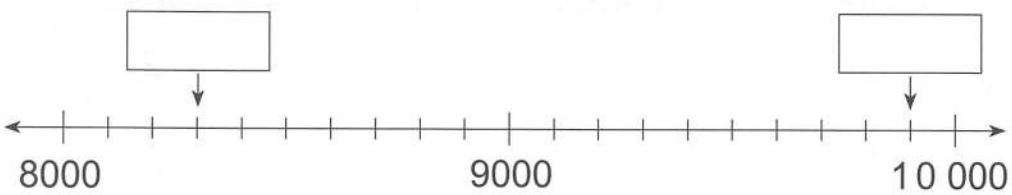


_____ is smaller than _____.

2.

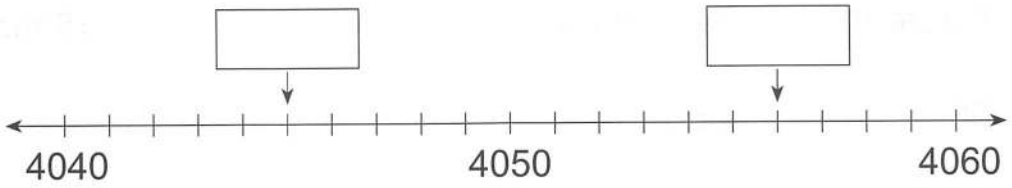
_____ is greater than _____.

3.



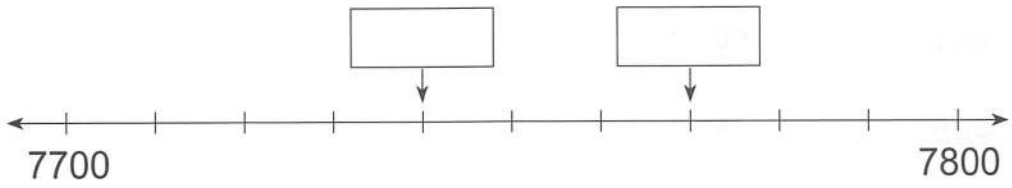
_____ is smaller than _____.

4.



_____ is greater than _____.

5.



_____ is smaller than _____.

(D) Fill in each blank with 'greater' or 'smaller'. **[5 marks]**

1. 1068 is _____ than 1168.
2. 8843 is _____ than 8803.
3. 7452 is _____ than 5252.
4. 3090 is _____ than 309.
5. 4234 is _____ than 4324.

(E) Circle the greater number. **[5 marks]**

1. 4123 3214
2. 8568 8658
3. 6097 6079
4. 5525 5520
5. 1999 9001

(F) Circle the smaller number. [5 marks]

1. 3654 3653
2. 7128 7281
3. 2305 2350
4. 9624 6942
5. 4857 4587

(G) Circle the greatest number. [5 marks]

1. 4614 4216 4461 4146
2. 9909 9999 9099 9990
3. 5115 5515 5551 5151
4. 7386 7836 7638 7863
5. 2745 2574 2457 2547

(H) Circle the smallest number. [5 marks]

1. 8624 6284 2648 2468
2. 3829 3920 9833 9230
3. 5625 6250 2056 2065
4. 6894 6498 6948 6849
5. 1307 1703 1073 1370

(I) Arrange these numbers in order. Begin with the greatest.

[5 marks]

1. 3619 6193 1936 9316

_____, _____, _____, _____

2. 5805 5508 5850 5058

_____, _____, _____, _____

3. 9396 6939 3699 9963

_____, _____, _____, _____

4. 4120 2014 4210 2104

_____, _____, _____, _____

5. 6818 6881 8116 8616

_____, _____, _____, _____

(J) Arrange these numbers in order. Begin with the smallest.

[5 marks]

1. 2424 8424 4424 1424

_____, _____, _____, _____

2. 8011 8101 8001 8118

_____, _____, _____, _____

3. 5240 4025 5045 4520

_____, _____, _____, _____

4. 6339 6933 3693 3369

_____, _____, _____, _____

5. 4916 4169 4691 4619

_____, _____, _____, _____

(K) Fill in each blank with the correct answer. [8 marks]

1. What is the greatest 4-digit odd number that can be formed using 1, 2, 3 and 4?

_____

2. What is the smallest 4-digit even number that can be formed using 5, 6, 7 and 8?

_____

3. What is the greatest 4-digit even number that can be formed using 1, 2, 3 and 4?

_____

4. What is the smallest 4-digit odd number that can be formed using 5, 6, 7 and 8?

_____

5. What is the greatest 4-digit odd number that can be formed using 9, 0, 1 and 2?

_____

6. What is the smallest 4-digit even number that can be formed using 5, 3, 8 and 6?

_____

7. What is the greatest 4-digit even number that can be formed using 4, 1, 7 and 2?

_____

8. What is the smallest 4-digit odd number that can be formed using 8, 9, 3 and 5?

_____

Complete number patterns

(A) Fill in each blank with the correct answer. **[16 marks]**

1. (a) What is 1 more than 2468? _____

   (b) What is 100 less than 2468? _____

   (c) What is 1000 more than 2468? _____

   (d) What is 10 less than 2468? _____

   (e) What is 100 more than 2468? _____

   (f) What is 1 less than 2468? _____

   (g) What is 10 more than 2468? _____

   (h) What is 1000 less than 2468? _____

2. (a) What is 10 less than 3579? _____

   (b) What is 100 more than 3579? _____

   (c) What is 1 less than 3579? _____

   (d) What is 1000 more than 3579? _____

   (e) What is 100 less than 3579? _____

   (f) What is 1 more than 3579? _____

   (g) What is 1000 less than 3579? _____

   (h) What is 10 more than 3579? _____

(B) Fill in each blank with the correct answer. **[16 marks]**

1. _____ is 20 more than 9104.
2. _____ is 5 less than 5520.
3. _____ is 3 more than 2345.
4. _____ is 400 less than 9898.
5. _____ is 3000 more than 4774.
6. _____ is 60 less than 1681.
7. _____ is 200 more than 6006.
8. _____ is 3000 less than 8597.
9. 3269 is _____ more than 3229.
10. 7175 is _____ less than 7675.
11. 8386 is _____ more than 8380.
12. 2010 is _____ less than 2060.
13. 4991 is _____ more than 2991.
14. 9504 is _____ less than 9509.
15. 6789 is _____ more than 6389.
16. 1027 is _____ less than 3027.

(C) Complete the number patterns. [10 marks]

1. 1540, 1545, _____, _____, 1560

2. 4869, _____, 4669, 4569, _____

3. 2330, 2340, _____, 2360, _____

4. 8719, _____, _____, 5719, 4719

5. 5876, 5886, _____, _____, 5916

6. 9100, 9050, _____, _____, 8900

7. _____, 6824, 6924, _____, 7124

8. 3978, _____, 2978, 2478, _____

9. _____, _____, 6051, 7051, 8051

10. _____, 7223, 7213, 7203, _____

2 Adding Numbers within 10 000

Add numbers within 10 000

(A) Find the sum of these numbers. **[5 marks]**

Example:

2675 and 124.

2675	1000, 1000	100, 100, 100, 100, 100	10, 10, 10, 10, 10	1, 1, 1, 1, 1
+				
124		100	10, 10	1, 1, 1, 1
=	1000, 1000	100, 100, 100, 100, 100, 100, 100	10, 10, 10, 10, 10, 10, 10	1, 1, 1, 1, 1, 1, 1

$$\begin{array}{r} 2675 \\ +\ 124 \\ \hline 2799 \end{array}$$

The sum of 2675 and 124 is **2799**.

1. 3311 and 545.

	1000	100	10	1
3311	1000	100		
	1000	100		
+				
		100	10	1
		100	10	1
545		100	10	1
		100	10	1
		100		1
=	1000	100 100	10	1 1
	1000	100 100	10	1
	1000	100 100	10	1
		100	10	1
		100	10	1

$$\begin{array}{r} 3\,3\,1\,1 \\ +\quad 5\,4\,5 \\ \hline \end{array}$$

_____ The sum of 3311 and 545 is _____.

2. 408 and 7270.

408		100 100 100 100		1 1 1 1 1 1 1 1 1
+				
7270	1000 1000 1000 1000 1000 1000 1000	100 100	10 10 10 10 10 10	
=	1000 1000 1000 1000 1000 1000 1000	100 100 100 100 100 100	10 10 10 10 10 10	1 1 1 1 1 1 1 1 1

$$\begin{array}{r} 4\,0\,8 \\ +\ 7\,2\,7\,0 \\ \hline \_\_\_\_\_ \end{array}$$

The sum of 408 and 7270 is _____.

3. 6254 and 2513.

6254

1000 1000	100	10	1
1000	100	10	1
1000		10	1
1000		10	1
1000		10	

\+

2513

1000	100	10	1
1000	100		1
	100		1
	100		
	100		

=

1000 1000	100 100	10 10	1 1
1000 1000	100 100	10	1 1
1000 1000	100	10	1
1000	100	10	1
1000	100	10	1

$$\begin{array}{r} 6\,2\,5\,4 \\ +\ 2\,5\,1\,3 \\ \hline \end{array}$$

_____ The sum of 6254 and 2513 is _____.

4. 1936 and 8032.

1936	1000	100 100 100 100 100 100 100 100 100	10 10 10	1 1 1 1 1 1
+				
8032	1000 1000 1000 1000 1000 1000 1000 1000		10 10 10	1 1
=	1000 1000 1000 1000 1000 1000 1000 1000 1000	100 100 100 100 100 100 100 100 100	10 10 10 10 10 10	1 1 1 1 1 1 1 1

$$\begin{array}{r} 1\,9\,3\,6 \\ +\ 8\,0\,3\,2 \\ \hline \_\_\_\_\_ \end{array}$$

The sum of 1936 and 8032 is _____.

5. 5143 and 4706.

5143	1000 1000 1000 1000 1000	100	10 10 10 10	1 1 1
+				
4706	1000 1000 1000 1000	100 100 100 100 100 100 100		1 1 1 1 1 1
=	1000 1000 1000 1000 1000 1000 1000 1000 1000 1000	100 100 100 100 100 100 100 100 100 100	10 10 10 10	1 1 1 1 1 1 1 1 1

$$\begin{array}{r} 5\,1\,4\,3 \\ +\ 4\,7\,0\,6 \\ \hline \end{array}$$

_____ The sum of 5143 and 4706 is _____.

(B) Add these numbers. Show your working clearly. [10 marks]

1. 5210 + 4689 = _____

2. 4037 + 232 = _____

3. 6512 + 3076 = _____

4. 4378 + 1521 = _____

5. 5321 + 3435 = _____

6. 53 + 3612 = _____

7. 2450 + 2528 = _____

8. 6642 + 2045 = _____

9. 4162 + 5417 = _____

10. 5652 + 2244 = _____

Perform addition by regrouping ones, tens and hundreds

(A) Fill in each blank with the correct answer. **[5 marks]**

Example:

The sum of 2794 and 5637 is **8431**.

$$\begin{array}{r} {\scriptstyle 1\ \ 1\ \ 1\ \ } \\ 2794 \\ +\ 5637 \\ \hline 8431 \end{array}$$

1. The sum of 4078 and 3659 is _____.

2. The sum of 6528 and 1473 is _____.

3. The sum of 4699 and 5277 is _____.

4. The sum of 3965 and 2245 is _____.

5. The sum of 2856 and 4786 is _____.

(B) Add these numbers. Show your working clearly. [20 marks]

1. 1745 + 6487 = _____

2. 8499 + 1324 = _____

3. 3356 + 4134 = _____

4. 4348 + 1625 = _____

5. 7430 + 1932 = _____

6. 2282 + 5453 = _____

7. 4908 + 1767 = _____

8. 6274 + 1538 = _____

9. 9126 + 184 = _____

10. 4873 + 4783 = _____

11. 5480 + 2385 = _____

12. 3869 + 2435 = _____

13. 3863 + 5576 = _____

14. 5657 + 3638 = _____

15. 5375 + 2917 = _____

16. 6281 + 1198 = _____

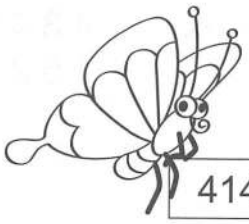
17. 4633 + 3047 = _____

18. 2282 + 4060 = _____

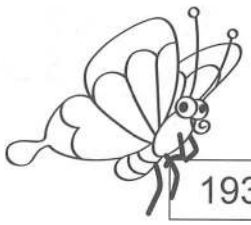
19. 3632 + 6269 = _____

20. 4956 + 3965 = _____

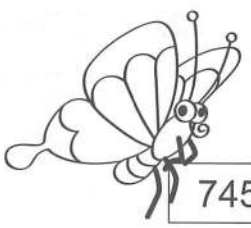
(C) Match each butterfly to the correct flower. [5 marks]



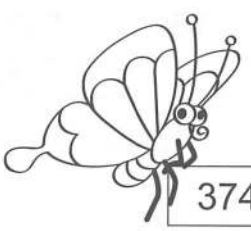
4147 + 2836 •



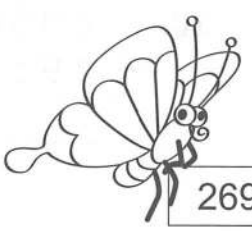
1939 + 4205 •



7450 + 1550 •



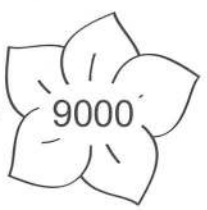
3740 + 1470 •



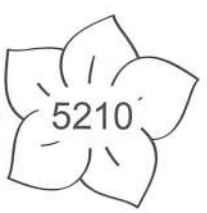
2698 + 1507 •

• 6144

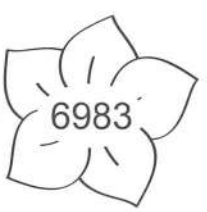
• 4205



• 9000



• 5210



• 6983

Add numbers mentally

(A) Do the following addition sums. **[20 marks]**

Example:

45 + 54 = 99

40 + 50 = 90

5 + 4 = 9

90 + 9 = 99

1. 37 + 62 = _____

_____ + _____ = _____

_____ + _____ = _____

_____ + _____ = _____

2. 71 + 23 = _____

_____ + _____ = _____

_____ + _____ = _____

_____ + _____ = _____

3. 64 + 25 = _____

_____ + _____ = _____

_____ + _____ = _____

_____ + _____ = _____

4. 55 + 12 = _____

_____ + _____ = _____

_____ + _____ = _____

_____ + _____ = _____

5. 44 + 41 = ____

____ + ____ = ____

____ + ____ = ____

____ + ____ = ____

6. 83 + 15 = ____

____ + ____ = ____

____ + ____ = ____

____ + ____ = ____

7. 22 + 57 = ____

____ + ____ = ____

____ + ____ = ____

____ + ____ = ____

8. 34 + 34 = ____

____ + ____ = ____

____ + ____ = ____

____ + ____ = ____

9. 66 + 13 = ____

____ + ____ = ____

____ + ____ = ____

____ + ____ = ____

10. 41 + 56 = ____

____ + ____ = ____

____ + ____ = ____

____ + ____ = ____

(B) Do the following addition sums. [20 marks]

Example:

57 + 36 = 93

36 + 4 = 40

53 + 40 = 93

1. 64 + 29 = _____

_____ + _____ = _____

_____ + _____ = _____

2. 18 + 78 = _____

_____ + _____ = _____

_____ + _____ = _____

3. 15 + 95 = _____

_____ + _____ = _____

_____ + _____ = _____

4. 49 + 32 = _____

_____ + _____ = _____

_____ + _____ = _____

5. 46 + 47 = _____

_____ + _____ = _____

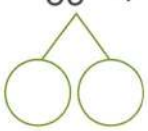
_____ + _____ = _____

6. 98 + 23 = _____

_____ + _____ = _____

_____ + _____ = _____

7. 59 + 19 = _____



_____ + _____ = _____

_____ + _____ = _____

8. 25 + 48 = _____

_____ + _____ = _____

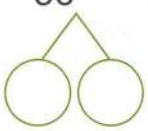
_____ + _____ = _____

9. 37 + 44 = _____

_____ + _____ = _____

_____ + _____ = _____

10. 96 + 56 = _____



_____ + _____ = _____

_____ + _____ = _____

Do Review 1 to practise on Numbers within 10 000 and Adding Numbers within 10 000.
Go to **My SAPeducation App** or www.sapgrp.com

3 Subtracting Numbers within 10 000

Subtract numbers within 10 000

(A) Find the difference between these numbers. **[5 marks]**

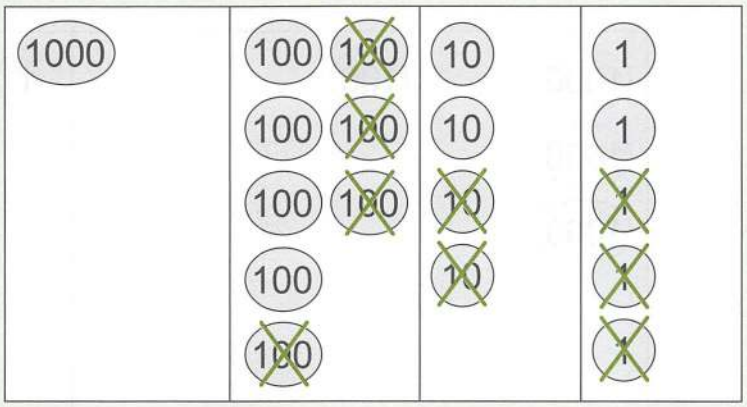
Example:

1845 and 423.

1845

–

423



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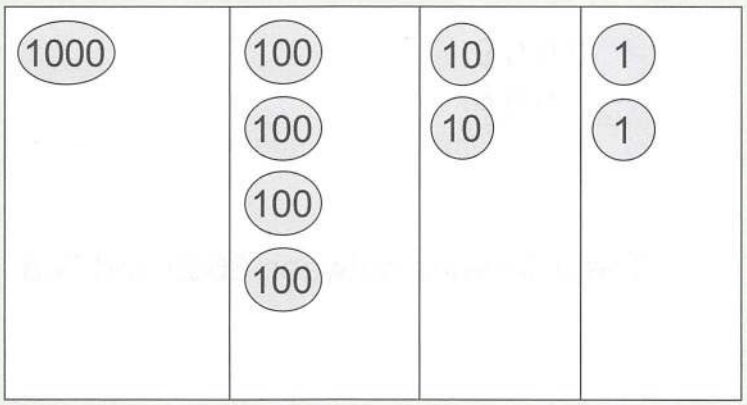


$$\begin{array}{r} 1\,8\,4\,5 \\ -\quad 4\,2\,3 \\ \hline 1\,4\,2\,2 \end{array}$$

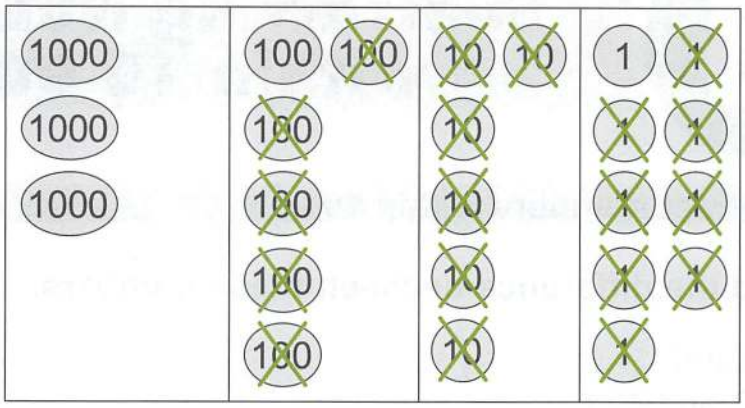
The difference between 1845 and 423 is **1422**.

1. 3669 and 568.

3669

–

568



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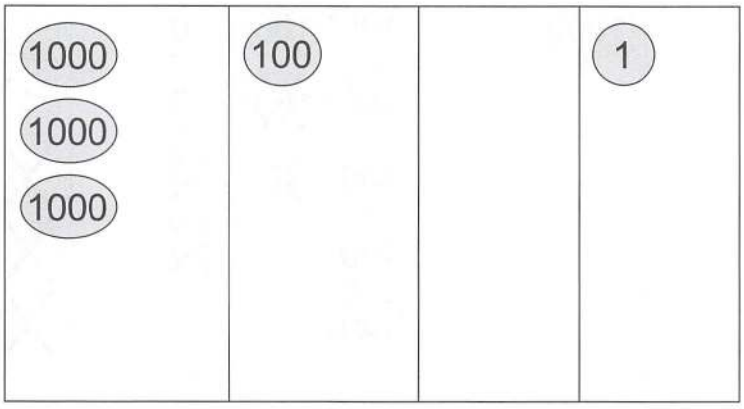


$$\begin{array}{r} 3669 \\ -\ 568 \\ \hline \\ \hline \end{array}$$

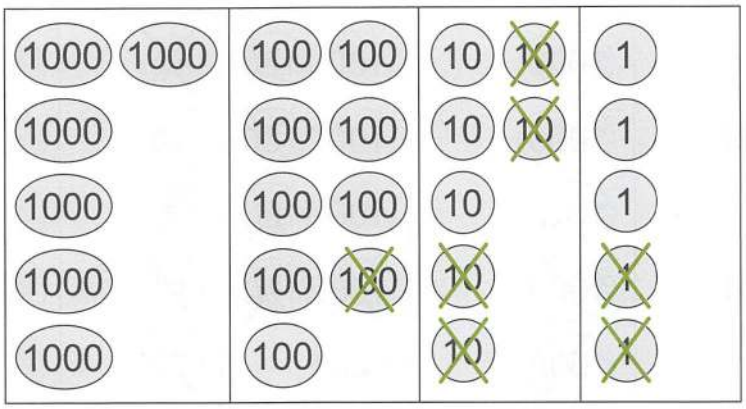
The difference between 3669 and 568 is _____.

2. 6975 and 142.

6975

–

142



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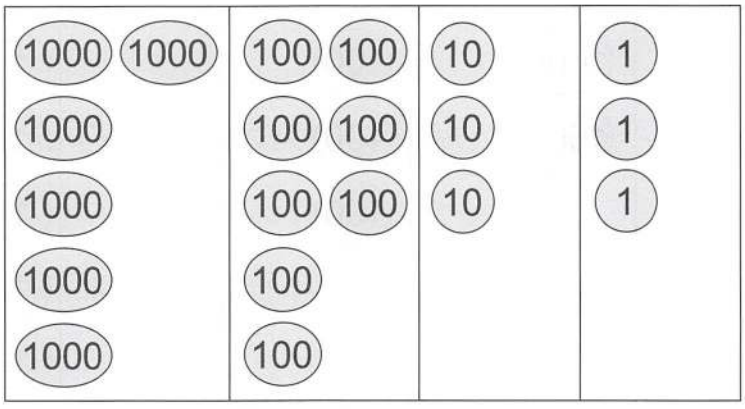


$$\begin{array}{r} 6\,9\,7\,5 \\ -\quad 1\,4\,2 \\ \hline \\ \hline \end{array}$$

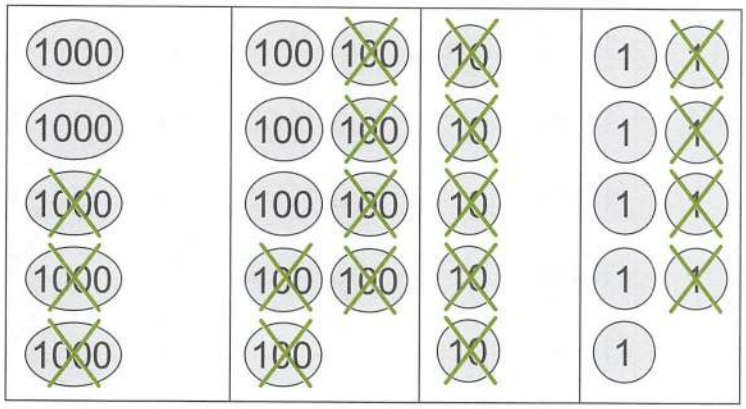
The difference between 6975 and 142 is _____.

3. 5959 and 3654.

5959

–

3654



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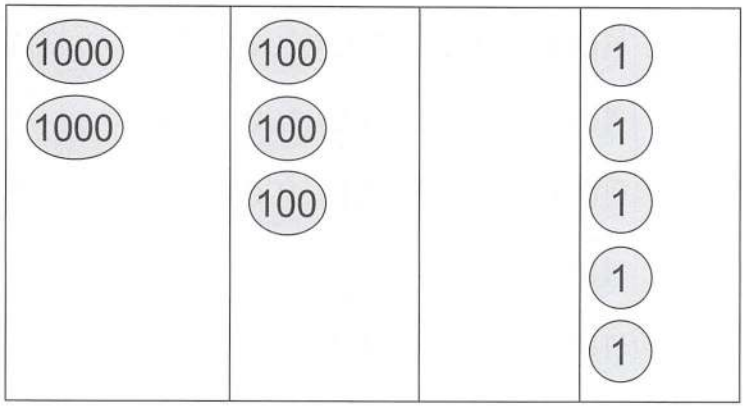


$$\begin{array}{r} 5\,9\,5\,9 \\ -\ 3\,6\,5\,4 \\ \hline \\ \hline \end{array}$$

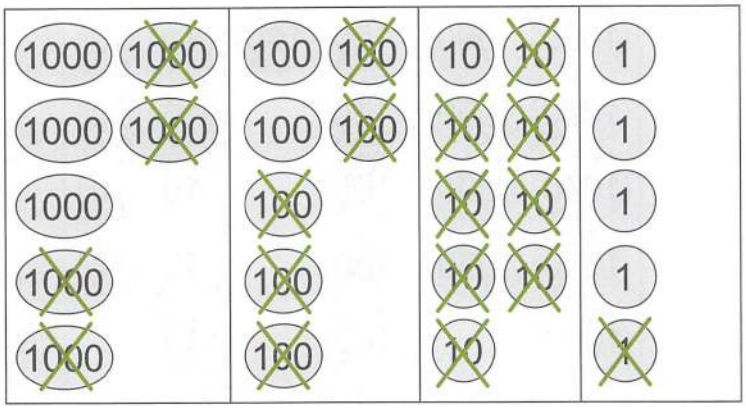
The difference between 5959 and 3654 is _____.

4. 7795 and 4581.

7795

–

4581



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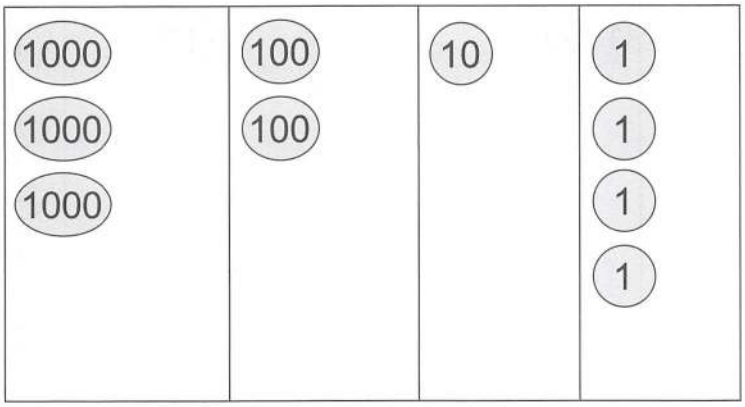


$$\begin{array}{r} 7\,7\,9\,5 \\ -\ 4\,5\,8\,1 \\ \hline \\ \hline \end{array}$$

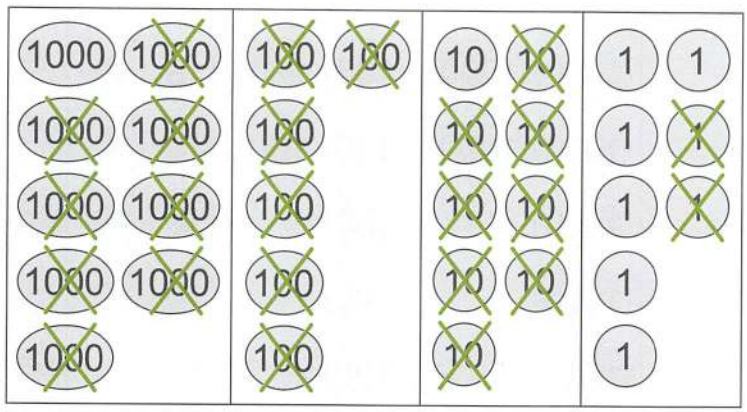
The difference between 7795 and 4581 is _____.

5. 9698 and 8682.

9698

–

8682



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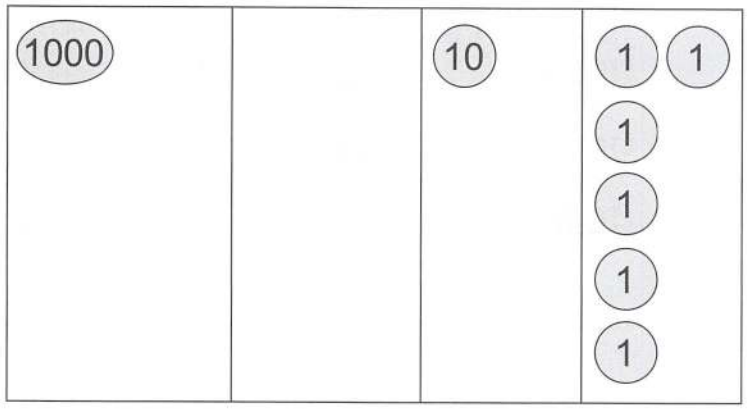


$$\begin{array}{r} 9\,6\,9\,8 \\ -\ 8\,6\,8\,2 \\ \hline \\ \hline \end{array}$$

The difference between 9698 and 8682 is _____.

(B) Subtract these numbers. Show your working clearly.

[10 marks]

1. 3869 − 235

2. 7787 − 4325

3. 6848 − 2005

4. 2426 − 1310

5. 8818 − 7107

6. 4945 − 2632

7. 5794 − 3780

8. 9697 − 4477

9. 5589 − 1368

10. 9936 − 6823

Perform subtraction by regrouping ones, tens, hundreds and thousands

Subtract these numbers. Show your working clearly. [20 marks]

Example:

$$\begin{array}{r} {\scriptstyle 6\ 17} \\ 9\,\not{7}\,\not{7}\,6 \\ -\ 1\,0\,8\,5 \\ \hline 8\,6\,9\,1 \end{array}$$

1. $\begin{array}{r} 5\,8\,8\,1 \\ -\ 4\,0\,5\,8 \\ \hline \end{array}$

2. $\begin{array}{r} 2\,9\,0\,0 \\ -\ \ 8\,9\,0 \\ \hline \end{array}$

3. $\begin{array}{r} 4\,1\,3\,6 \\ -\ 2\,1\,2\,8 \\ \hline \end{array}$

4. $\begin{array}{r} 7\,4\,3\,1 \\ -\ 5\,6\,1\,1 \\ \hline \end{array}$

5. $\begin{array}{r} 9\,1\,3\,0 \\ -\ 3\,6\,8\,4 \\ \hline \end{array}$

6. $\begin{array}{r} 8\,2\,9\,2 \\ -\ 2\,5\,0\,5 \\ \hline \end{array}$

7. $\begin{array}{r} 5\,3\,9\,2 \\ -\ 2\,8\,8\,6 \\ \hline \end{array}$

8. $\begin{array}{r} 4\,9\,8\,8 \\ -\ 3\,9\,6\,9 \\ \hline \end{array}$

9. $\begin{array}{r} 9\,3\,6\,8 \\ -\ 1\,4\,8\,7 \\ \hline \end{array}$

10. $\begin{array}{r} 2\,3\,7\,6 \\ -\ 1\,4\,8\,7 \\ \hline \end{array}$

11. $\begin{array}{r} 8\,0\,0\,0 \\ -\ 4\,6\,5\,9 \\ \hline \end{array}$

12. $\begin{array}{r} 3\,5\,7\,6 \\ -\ 1\,8\,9\,9 \\ \hline \end{array}$

13. $\begin{array}{r} 6\,0\,0\,5 \\ -\ 4\,7\,6\,9 \\ \hline \end{array}$

14. $\begin{array}{r} 8\,0\,1\,0 \\ -\ 3\,8\,6\,5 \\ \hline \end{array}$

15. $\begin{array}{r} 5\,3\,5\,3 \\ -\ 1\,5\,2\,6 \\ \hline \end{array}$

16. $\begin{array}{r} 3\,3\,5\,0 \\ -\ 1\,5\,9\,8 \\ \hline \end{array}$

17. $\begin{array}{r} 6\,2\,0\,6 \\ -\ 2\,0\,6\,2 \\ \hline \end{array}$

18. $\begin{array}{r} 9\,1\,2\,3 \\ -\ 2\,5\,7\,6 \\ \hline \end{array}$

19. $\begin{array}{r} 7\,0\,0\,7 \\ -\ 4\,3\,3\,4 \\ \hline \end{array}$

20. $\begin{array}{r} 8\,1\,8\,1 \\ -\ 1\,9\,8\,9 \\ \hline \end{array}$

Subtract numbers mentally

(A) Do the following subtraction sums. **[20 marks]**

Example:

58 – 25 = 33

50 – 20 = 30

8 – 5 = 3

30 + 3 = 33

1. 99 – 13 = _____

_____ – _____ = _____

_____ – _____ = _____

_____ + _____ = _____

2. 67 – 44 = _____

_____ – _____ = _____

_____ – _____ = _____

_____ + _____ = _____

3. 86 – 32 = _____

_____ – _____ = _____

_____ – _____ = _____

_____ + _____ = _____

4. 45 – 24 = _____

_____ – _____ = _____

_____ – _____ = _____

_____ + _____ = _____

5. 79 – 61 = ____

____ – ____ = ____

____ – ____ = ____

____ + ____ = ____

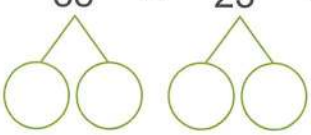
6. 57 – 16 = ____

____ – ____ = ____

____ – ____ = ____

____ + ____ = ____

7. 88 – 23 = ____



____ – ____ = ____

____ – ____ = ____

____ + ____ = ____

8. 65 – 31 = ____

____ – ____ = ____

____ – ____ = ____

____ + ____ = ____

9. 96 – 54 = ____

____ – ____ = ____

____ – ____ = ____

____ + ____ = ____

10. 77 – 42 = ____

____ – ____ = ____

____ – ____ = ____

____ + ____ = ____

(B) Do the following subtraction sums. [20 marks]

Example:

62 – 36 = 26

62 – 32 = 30

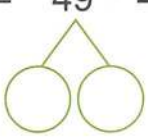
30 – 4 = 26

1. 54 – 27 = ____

____ – ____ = ____

____ – ____ = ____

2. 71 – 49 = ____



____ – ____ = ____

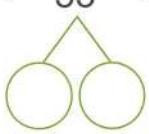
____ – ____ = ____

3. 45 – 18 = ____

____ – ____ = ____

____ – ____ = ____

4. 83 – 55 = ____



____ – ____ = ____

____ – ____ = ____

5. 66 – 29 = _____

_____ – _____ = _____

_____ – _____ = _____

6. 90 – 62 = _____

_____ – _____ = _____

_____ – _____ = _____

7. 72 – 33 = _____

_____ – _____ = _____

_____ – _____ = _____

8. 51 – 16 = _____

_____ – _____ = _____

_____ – _____ = _____

9. 80 – 47 = _____

_____ – _____ = _____

_____ – _____ = _____

10. 44 – 28 = _____

_____ – _____ = _____

_____ – _____ = _____

4 Word Problems on Addition and Subtraction

Solve up to two-step word problems related to addition and subtraction

Do these word problems. Show your working clearly in the space provided.

1. Sandy has 236 stickers. Linda has 127 fewer stickers than Sandy.
   (a) How many stickers does Linda have? **[1 mark]**
   (b) How many stickers do they have altogether? **[1 mark]**

2. Ken travels 3280 m on his motorcycle. Steve travels 568 m further than Ken in his car. How far do they travel altogether? **[2 marks]**

3. Tina has 2345 stamps in her collection. Candice has 3542 stamps in her collection.

(a) How many more stamps does Candice have than Tina? **[1 mark]**

(b) How many stamps do they have altogether? **[1 mark]**

4. Joslin earns $2140 a month. Linda earns $150 more than Joslin. Tracy earns $270 less than Linda. How much does Tracy earn? **[2 marks]**

5. Rebecca pays $2080 for her television set. Diana pays $275 less than Rebecca for her television set.

(a) How much does Diana pay for her television set? **[1 mark]**

(b) How much do both television sets cost? **[1 mark]**

6. 3865 girls went to a concert. 1459 more boys than girls went to the same concert. How many children went to the concert altogether? **[2 marks]**

7. 2015 people attended a carnival on Saturday. 3585 more people attended the carnival on Sunday than on Saturday. How many people attended the carnival on both days? **[2 marks]**

8. Jason used 1075 kg of cement to build a house on Monday. He used 360 kg less cement on Tuesday than on Monday. How much cement did he use on both days? **[2 marks]**

9. A second-hand van costs $5180. It costs $3960 to buy a second-hand motorcycle.

(a) How much cheaper is the second-hand motorcycle than the second-hand van? **[1 mark]**

(b) How much will it cost to buy both the second-hand van and the second-hand motorcycle? **[1 mark]**

10. Joanna spent $2387 on clothes last year. Her parents told her to spend $500 less on clothes this year than last year.

(a) How much could Joanna spend on clothes this year? **[1 mark]**

(b) If Joanna were to spend $4000 on clothes this year, how much would she have overspent? **[1 mark]**

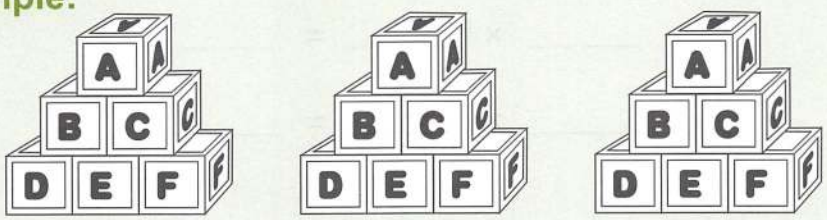
Do Review 2 to practise on Subtracting Numbers within 10 000 and Word Problems on Addition and Subtraction.
Go to **My SAPeducation App** or www.sapgrp.com

5 Multiplying Numbers by 6, 7, 8 and 9

Multiply numbers by 6

(A) Study the pictures carefully. Write two multiplication equations. [10 marks]

Example:



3 × 6 = 18

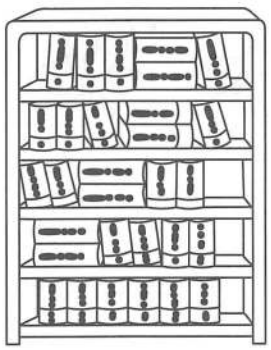
6 × 3 = 18

1.

_____ × _____ = _____

_____ × _____ = _____

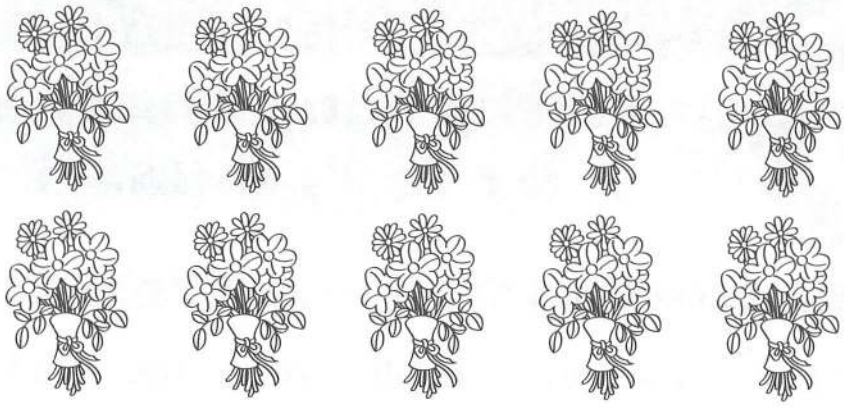
2.



_____ × _____ = _____

_____ × _____ = _____

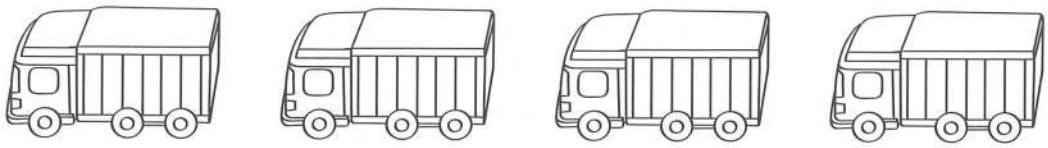
3.



_____ × _____ = _____

_____ × _____ = _____

4.



_____ × _____ = _____

_____ × _____ = _____

5.

_____ × _____ = _____

_____ × _____ = _____

(B) Fill in each blank with the correct answer. [16 marks]

1. (a) $1 \times 6 =$ _____

   (b) $9 \times 6 =$ _____

   (c) $5 \times 6 =$ _____

   (d) $0 \times 6 =$ _____

   (e) $2 \times 6 =$ _____

   (f) $8 \times 6 =$ _____

   (g) $7 \times 6 =$ _____

   (h) $4 \times 6 =$ _____

   (i) $6 \times 6 =$ _____

   (j) $3 \times 6 =$ _____

   (k) $10 \times 6 =$ _____

2. (a) _____ $\times 6 = 48$

   (b) _____ $\times 6 = 30$

   (c) _____ $\times 6 = 42$

   (d) $6 \times$ _____ $= 18$

   (e) $6 \times$ _____ $= 36$

(C) Fill in each blank with the correct answer. [18 marks]

Examples:

$6 \times 6 = ?$

$5 \times 6 =$ 30

$1 \times 6 =$ 6

$6 \times 6 =$ 30 + 6

$=$ 36

$9 \times 6 = ?$

$10 \times 6 =$ 60

$1 \times 6 =$ 6

$9 \times 6 =$ 60 − 6

$=$ 54

1. $9 \times 6 = ?$

$5 \times 6 =$ _____

$4 \times 6 =$ _____

$9 \times 6 =$ _____ + _____

$=$ _____

2. $7 \times 6 = ?$

$5 \times 6 =$ _____

$2 \times 6 =$ _____

$7 \times 6 =$ _____ + _____

$=$ _____

3. $8 \times 6 = ?$

$5 \times 6 =$ _____

$3 \times 6 =$ _____

$8 \times 6 =$ _____ + _____

$=$ _____

4. $6 \times 6 = ?$

$10 \times 6 =$ _____

$4 \times 6 =$ _____

$6 \times 6 =$ _____ − _____

$=$ _____

5. $8 \times 6 = ?$

$10 \times 6 =$ _____

$2 \times 6 =$ _____

$8 \times 6 =$ _____ − _____

$=$ _____

6. $7 \times 6 = ?$

$10 \times 6 =$ _____

$3 \times 6 =$ _____

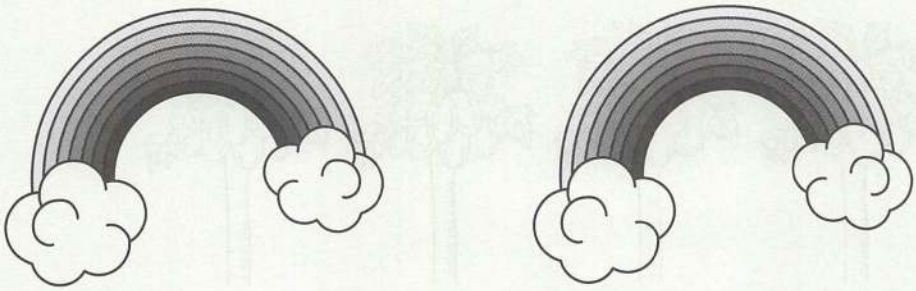
$7 \times 6 =$ _____ − _____

$=$ _____

Multiply numbers by 7

(A) Study the pictures carefully. Write two multiplication equations. [10 marks]

Example:



2 × 7 = 14

7 × 2 = 14

1.

____ × ____ = ____

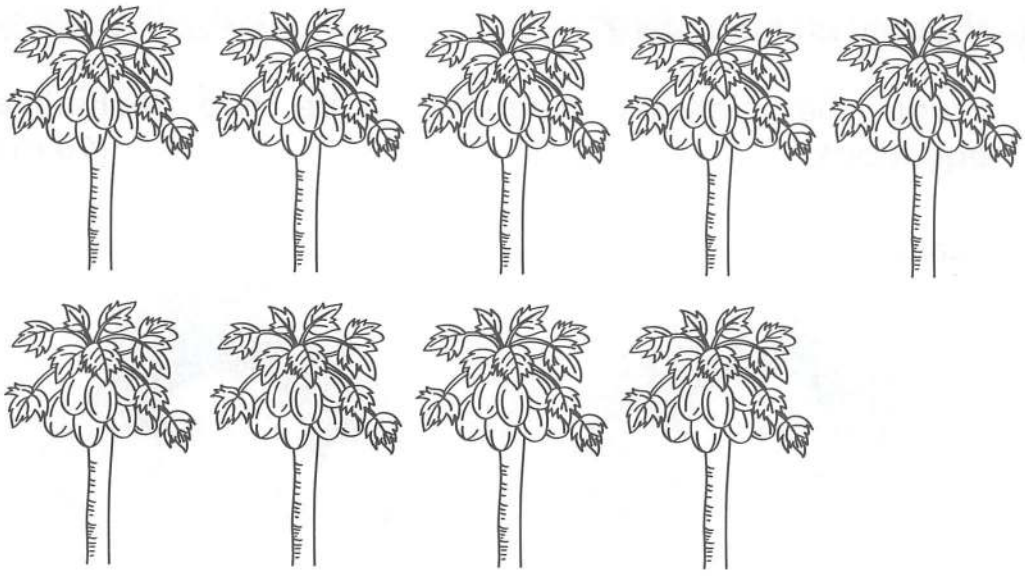
____ × ____ = ____

2.

____ × ____ = ____

____ × ____ = ____

3.



_____ × _____ = _____

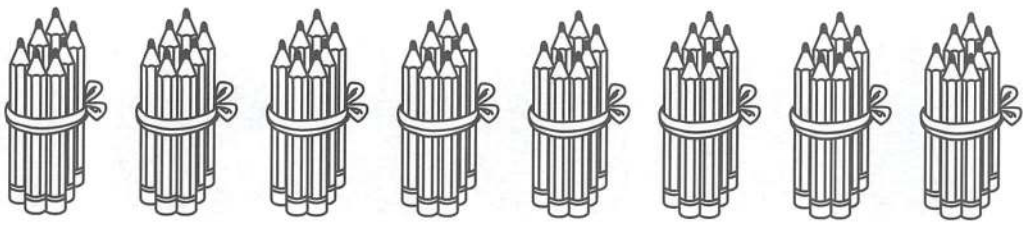
_____ × _____ = _____

4.

_____ × _____ = _____

_____ × _____ = _____

5.



_____ × _____ = _____

_____ × _____ = _____

(B) Fill in each blank with the correct answer. [16 marks]

1. (a) $2 \times 7 =$ _____

   (b) $3 \times 7 =$ _____

   (c) $6 \times 7 =$ _____

   (d) $8 \times 7 =$ _____

   (e) $1 \times 7 =$ _____

   (f) $0 \times 7 =$ _____

   (g) $4 \times 7 =$ _____

   (h) $5 \times 7 =$ _____

   (i) $9 \times 7 =$ _____

   (j) $7 \times 7 =$ _____

   (k) $10 \times 7 =$ _____

2. (a) _____ $\times 7 = 28$

   (b) _____ $\times 7 = 70$

   (c) _____ $\times 7 = 56$

   (d) $7 \times$ _____ $= 14$

   (e) $7 \times$ _____ $= 63$

(C) Fill in each blank with the correct answer. [18 marks]

Examples:

$6 \times 7 = ?$

$5 \times 7 =$ 35

$1 \times 7 =$ 7

$6 \times 7 =$ 35 + 7

$=$ 42

$9 \times 7 = ?$

$10 \times 7 =$ 70

$1 \times 7 =$ 7

$9 \times 7 =$ 70 − 7

$=$ 63

1. $8 \times 7 = ?$

$5 \times 7 =$ _____

$3 \times 7 =$ _____

$8 \times 7 =$ _____ + _____

$=$ _____

2. $9 \times 7 = ?$

$5 \times 7 =$ _____

$4 \times 7 =$ _____

$9 \times 7 =$ _____ + _____

$=$ _____

3. $7 \times 7 = ?$

$5 \times 7 =$ _____

$2 \times 7 =$ _____

$7 \times 7 =$ _____ + _____

$=$ _____

4. $7 \times 7 = ?$

$10 \times 7 =$ _____

$3 \times 7 =$ _____

$7 \times 7 =$ _____ − _____

$=$ _____

5. $6 \times 7 = ?$

$10 \times 7 =$ _____

$4 \times 7 =$ _____

$6 \times 7 =$ _____ − _____

$=$ _____

6. $8 \times 7 = ?$

$10 \times 7 =$ _____

$2 \times 7 =$ _____

$8 \times 7 =$ _____ − _____

$=$ _____

Multiply numbers by 8

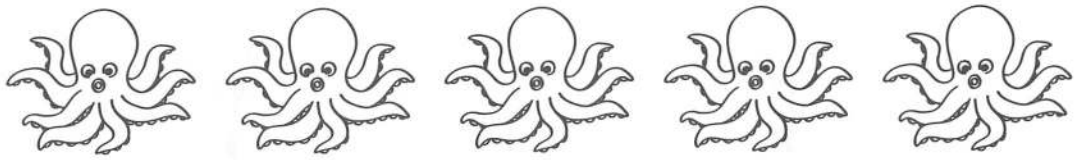
(A) Study the pictures carefully. Write two multiplication equations. **[10 marks]**

Example:

4 × 8 = 32

8 × 4 = 32

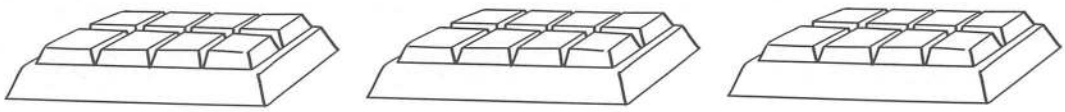
1.



____ × ____ = ____

____ × ____ = ____

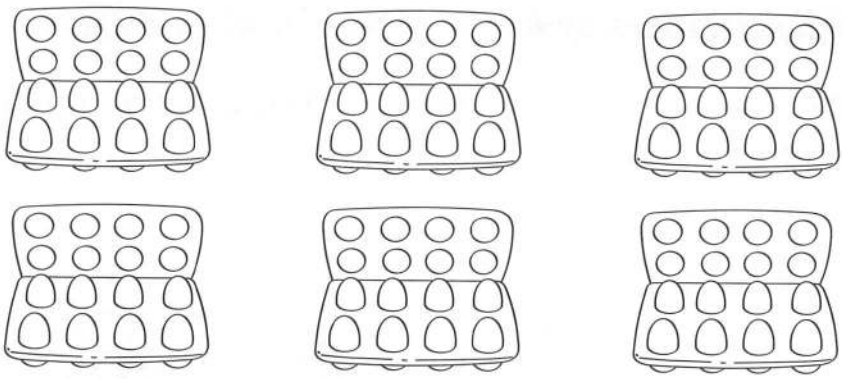
2.



____ × ____ = ____

____ × ____ = ____

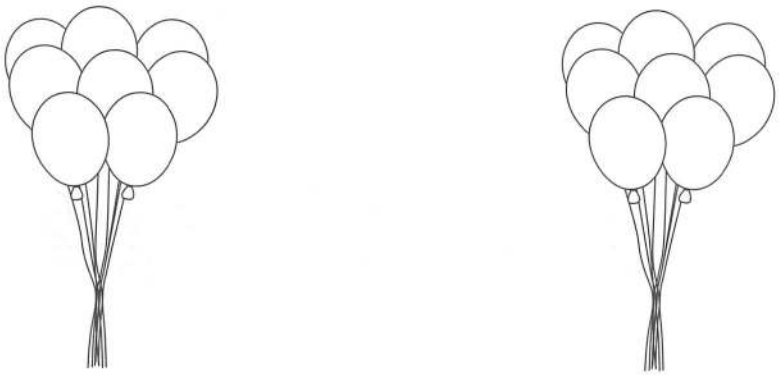
3.



_____ × _____ = _____

_____ × _____ = _____

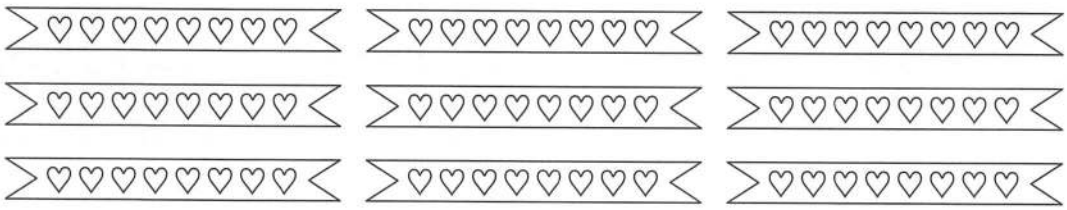
4.



_____ × _____ = _____

_____ × _____ = _____

5.



_____ × _____ = _____

_____ × _____ = _____

(B) Fill in each blank with the correct answer. [16 marks]

1. (a) $0 \times 8 =$ _____

   (b) $10 \times 8 =$ _____

   (c) $7 \times 8 =$ _____

   (d) $8 \times 8 =$ _____

   (e) $2 \times 8 =$ _____

   (f) $5 \times 8 =$ _____

   (g) $9 \times 8 =$ _____

   (h) $3 \times 8 =$ _____

   (i) $6 \times 8 =$ _____

   (j) $4 \times 8 =$ _____

   (k) $1 \times 8 =$ _____

2. (a) _____ $\times 8 = 24$

   (b) _____ $\times 8 = 8$

   (c) _____ $\times 8 = 72$

   (d) $8 \times$ _____ $= 32$

   (e) $8 \times$ _____ $= 56$

(C) Fill in each blank with the correct answer. [18 marks]

Examples:

$6 \times 8 = ?$

$5 \times 8 =$ 40

$1 \times 8 =$ 8

$6 \times 8 =$ 40 + 8

$=$ 48

$9 \times 8 = ?$

$10 \times 8 =$ 80

$1 \times 8 =$ 8

$9 \times 8 =$ 80 − 8

$=$ 72

1. $7 \times 8 = ?$

$5 \times 8 =$ _____

$2 \times 8 =$ _____

$7 \times 8 =$ _____ + _____

$=$ _____

2. $9 \times 8 = ?$

$5 \times 8 =$ _____

$4 \times 8 =$ _____

$9 \times 8 =$ _____ + _____

$=$ _____

3. $8 \times 8 = ?$

$5 \times 8 =$ _____

$3 \times 8 =$ _____

$8 \times 8 =$ _____ + _____

$=$ _____

4. $8 \times 8 = ?$

$10 \times 8 =$ _____

$2 \times 8 =$ _____

$8 \times 8 =$ _____ − _____

$=$ _____

5. $7 \times 8 = ?$

$10 \times 8 =$ _____

$3 \times 8 =$ _____

$7 \times 8 =$ _____ − _____

$=$ _____

6. $6 \times 8 = ?$

$10 \times 8 =$ _____

$4 \times 8 =$ _____

$6 \times 8 =$ _____ − _____

$=$ _____

Multiply numbers by 9

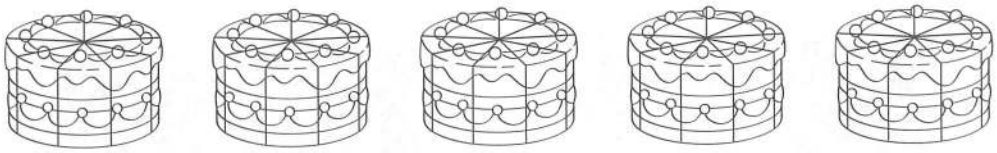
(A) Study the pictures carefully. Write two multiplication equations. **[10 marks]**

Example:

3 × 9 = 27

9 × 3 = 27

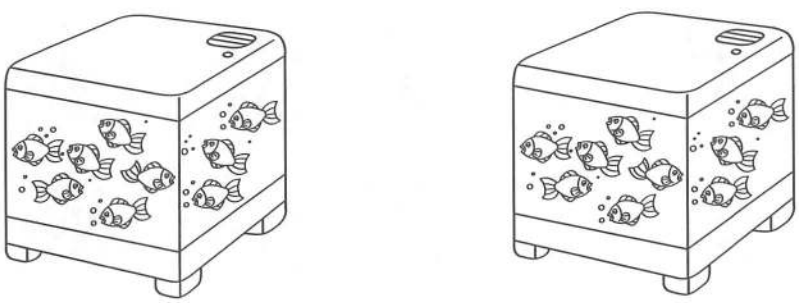
1.



____ × ____ = ____

____ × ____ = ____

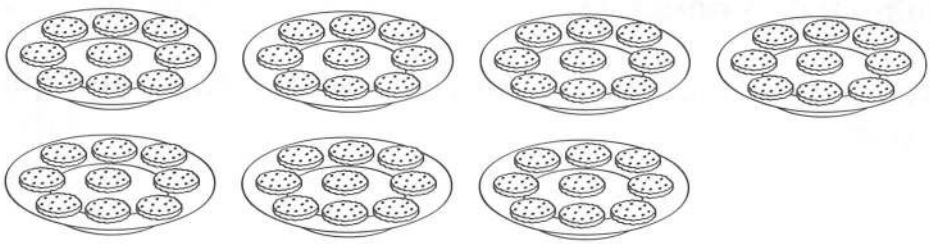
2.



____ × ____ = ____

____ × ____ = ____

3.



_____ × _____ = _____

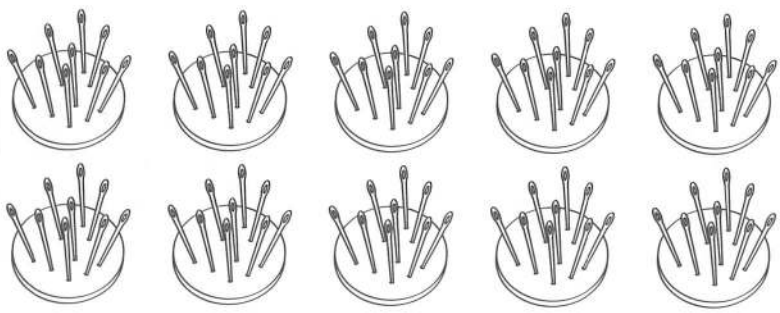
_____ × _____ = _____

4.

_____ × _____ = _____

_____ × _____ = _____

5.



_____ × _____ = _____

_____ × _____ = _____

(B) Fill in each blank with the correct answer. [16 marks]

1. (a) $3 \times 9 =$ _____

   (b) $4 \times 9 =$ _____

   (c) $2 \times 9 =$ _____

   (d) $1 \times 9 =$ _____

   (e) $0 \times 9 =$ _____

   (f) $10 \times 9 =$ _____

   (g) $9 \times 9 =$ _____

   (h) $8 \times 9 =$ _____

   (i) $5 \times 9 =$ _____

   (j) $6 \times 9 =$ _____

   (k) $7 \times 9 =$ _____

2. (a) _____ $\times 9 = 45$

   (b) _____ $\times 9 = 90$

   (c) _____ $\times 9 = 36$

   (d) $9 \times$ _____ $= 54$

   (e) $9 \times$ _____ $= 72$

(C) Fill in each blank with the correct answer. [18 marks]

Examples:

$6 \times 9 = ?$

$5 \times 9 = \underline{45}$

$1 \times 9 = \underline{9}$

$6 \times 9 = \underline{45} + \underline{9}$

$= \underline{54}$

$9 \times 9 = ?$

$10 \times 9 = \underline{90}$

$1 \times 9 = \underline{9}$

$9 \times 9 = \underline{90} - \underline{9}$

$= \underline{81}$

1. $9 \times 9 = ?$

$5 \times 9 = \_\_\_\_$

$4 \times 9 = \_\_\_\_$

$9 \times 9 = \_\_\_\_ + \_\_\_\_$

$= \_\_\_\_$

2. $8 \times 9 = ?$

$5 \times 9 = \_\_\_\_$

$3 \times 9 = \_\_\_\_$

$8 \times 9 = \_\_\_\_ + \_\_\_\_$

$= \_\_\_\_$

3. $7 \times 9 = ?$

$5 \times 9 = \_\_\_\_$

$2 \times 9 = \_\_\_\_$

$7 \times 9 = \_\_\_\_ + \_\_\_\_$

$= \_\_\_\_$

4. $6 \times 9 = ?$

$10 \times 9 = \_\_\_\_$

$4 \times 9 = \_\_\_\_$

$6 \times 9 = \_\_\_\_ - \_\_\_\_$

$= \_\_\_\_$

5. $7 \times 9 = ?$

$10 \times 9 = \_\_\_\_$

$3 \times 9 = \_\_\_\_$

$7 \times 9 = \_\_\_\_ - \_\_\_\_$

$= \_\_\_\_$

6. $8 \times 9 = ?$

$10 \times 9 = \_\_\_\_$

$2 \times 9 = \_\_\_\_$

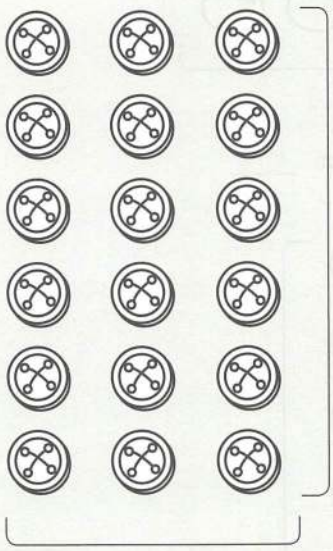
$8 \times 9 = \_\_\_\_ - \_\_\_\_$

$= \_\_\_\_$

Multiply numbers by 6, 7, 8 and 9

Study the pictures carefully. Write two multiplication equations.
[16 marks]

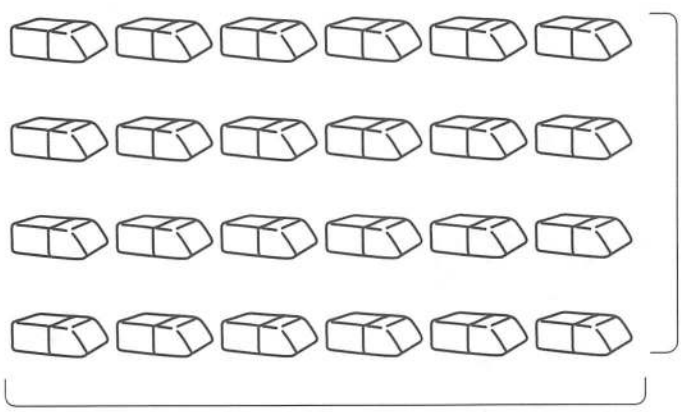
Example:



6 × 3 = 18

3 × 6 = 18

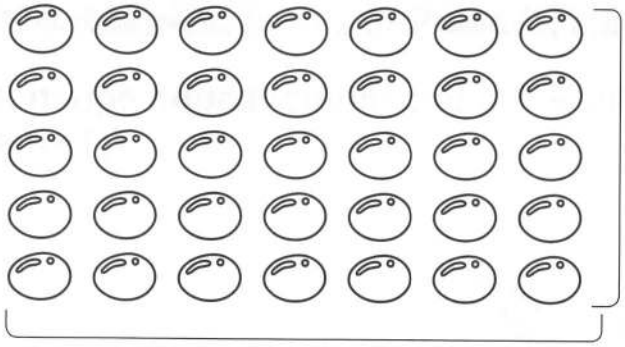
1.



___ × ___ = ___

___ × ___ = ___

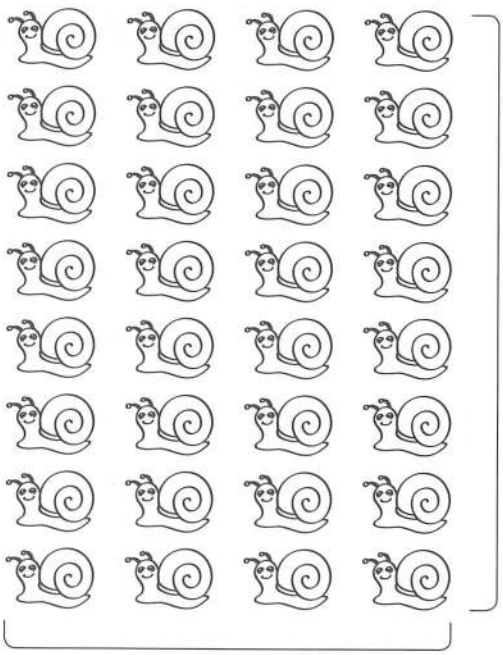
2.



____ × ____ = ____

____ × ____ = ____

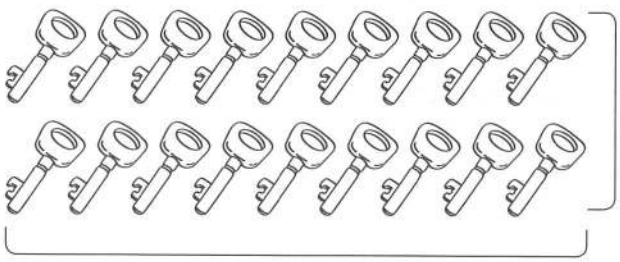
3.



____ × ____ = ____

____ × ____ = ____

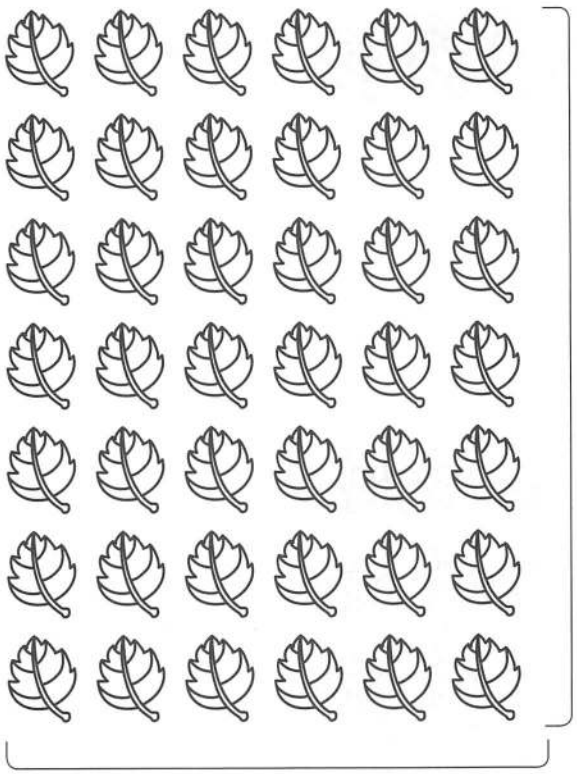
4.



____ × ____ = ____

____ × ____ = ____

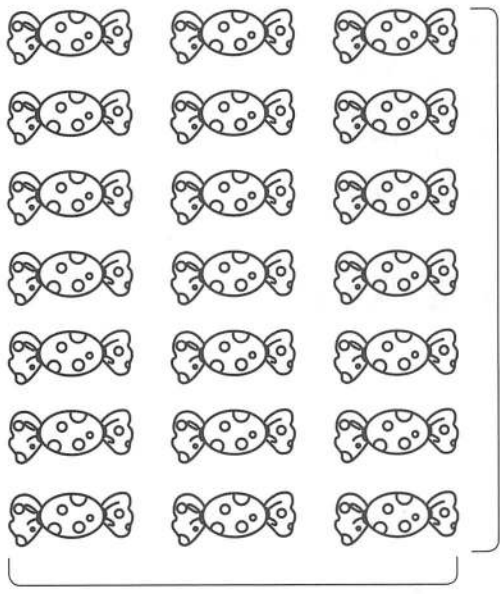
5.



____ × ____ = ____

____ × ____ = ____

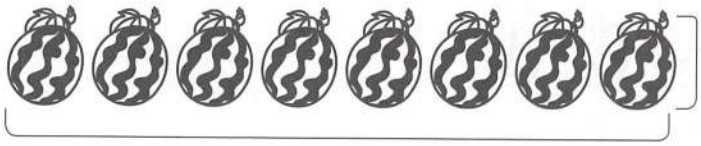
6.



____ × ____ = ____

____ × ____ = ____

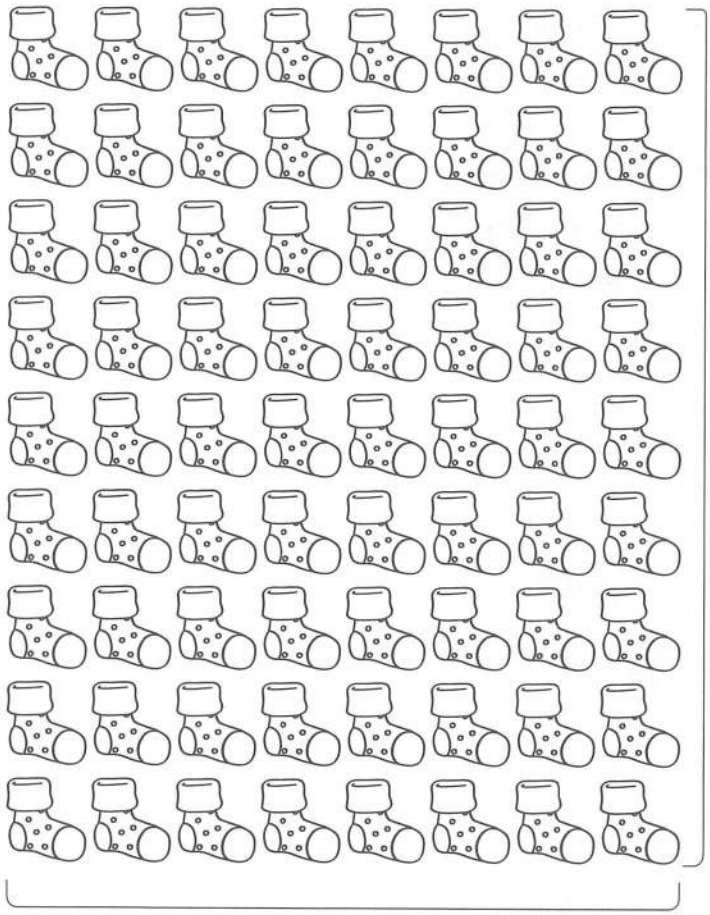
7.



____ × ____ = ____

____ × ____ = ____

8.



____ × ____ = ____

____ × ____ = ____

Divide numbers using multiplication facts

(A) Fill in each blank with the correct answer. **[8 marks]**

Example:

Put 14 chocolates equally into 7 boxes.

14 ÷ 7 = 2 $7 \times 2 = 14$

There are 2 chocolates in each box.

1. Arrange 30 balls equally in 6 rows.

_____ ÷ _____ = _____

There are _____ balls in each row.

2. Place 28 marbles equally into 7 containers.

_____ ÷ _____ = _____

There are _____ marbles in each container.

3. Group 27 students equally into 9 teams.

_____ ÷ _____ = _____

There are _____ students in each team.

4. Pack 48 crayons equally into 8 boxes.

_____ ÷ _____ = _____

There are _____ crayons in each box.

5. Divide 49 cherries equally among friends. Each friend gets 7 cherries.

_____ ÷ _____ = _____

There are _____ friends.

6. Set 40 chairs equally to round tables. There are 8 chairs to each round table.

_____ ÷ _____ = _____

There are _____ round tables.

7. Share 36 toys equally among children. Each child gets 6 toys.

_____ ÷ _____ = _____

There are _____ children.

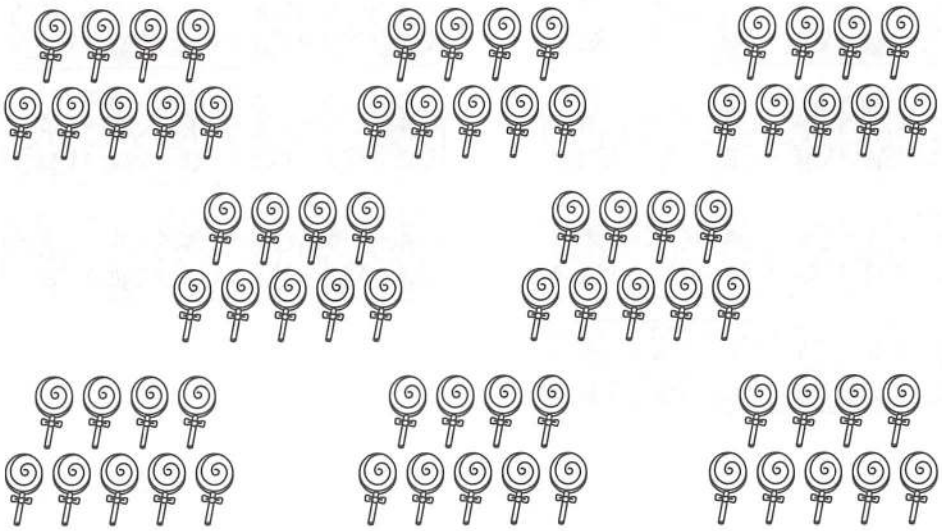
8. Place 90 cookies equally onto trays. Each tray has 9 cookies.

_____ ÷ _____ = _____

There are _____ trays of cookies.

(B) Study the pictures carefully. Write two multiplication and division sentences for each picture. [20 marks]

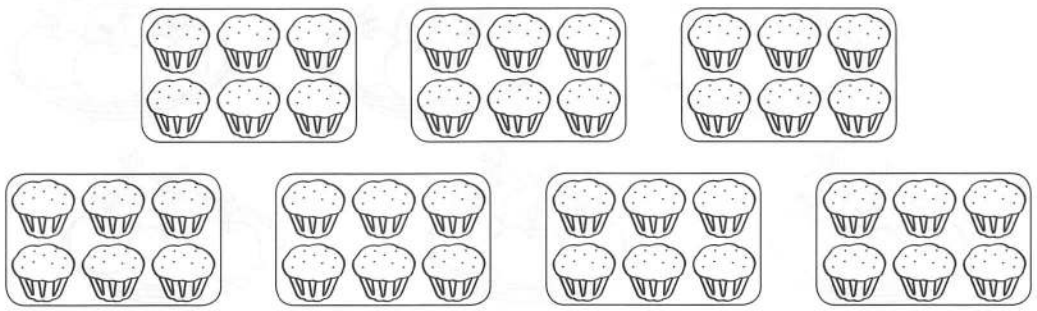
1.



_____ × _____ = _____ _____ ÷ _____ = _____

_____ × _____ = _____ _____ ÷ _____ = _____

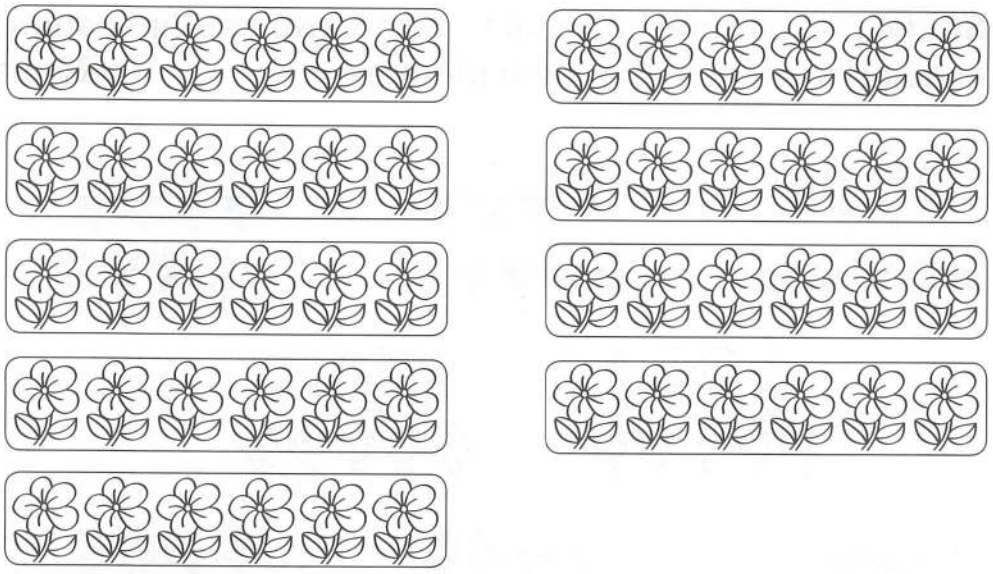
2.



_____ × _____ = _____ _____ ÷ _____ = _____

_____ × _____ = _____ _____ ÷ _____ = _____

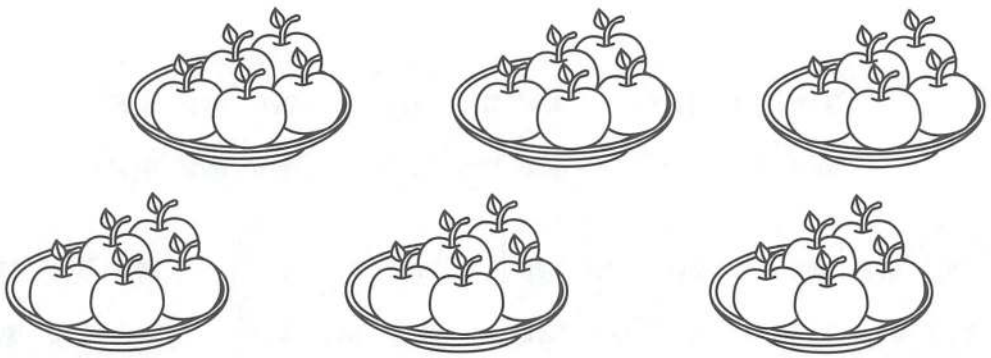
3.



_____ × _____ = _____ _____ ÷ _____ = _____

_____ × _____ = _____ _____ ÷ _____ = _____

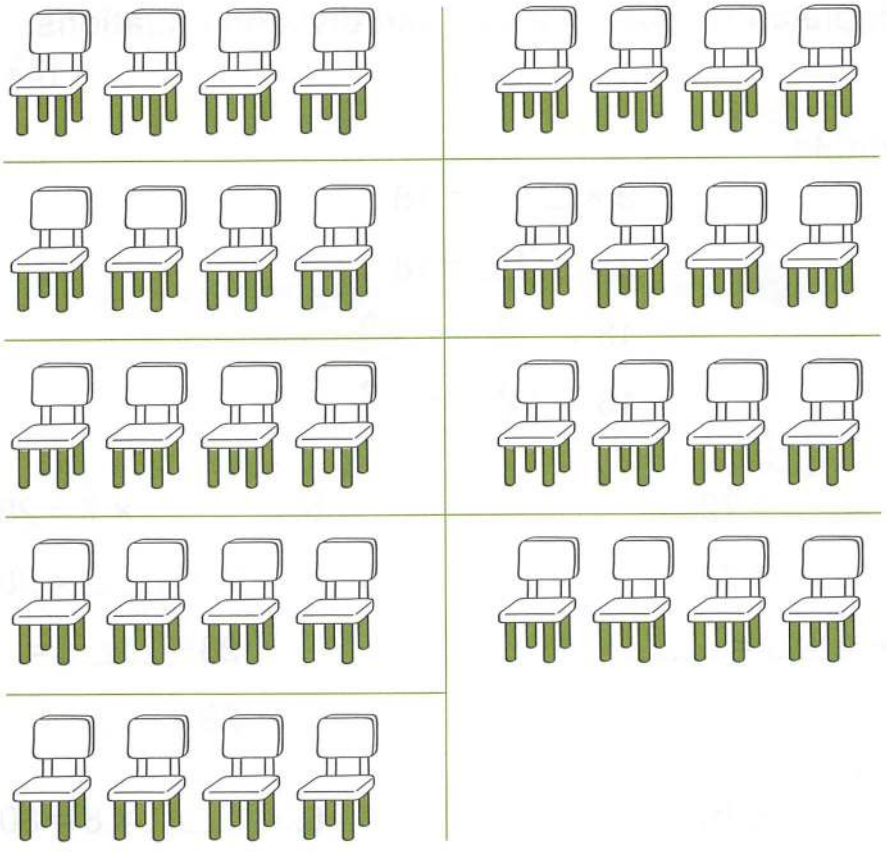
4.



_____ × _____ = _____ _____ ÷ _____ = _____

_____ × _____ = _____ _____ ÷ _____ = _____

5.



_____ × _____ = _____ _____ ÷ _____ = _____

_____ × _____ = _____ _____ ÷ _____ = _____

(C) Complete the multiplication and division equations.

[32 marks]

Example:

$9 \times \underline{2} = 18$

$2 \times \underline{9} = 18$

$18 \div \underline{2} = \underline{9}$

$18 \div \underline{9} = \underline{2}$

1. $8 \times \_\_\_\_ = 72$

$9 \times \_\_\_\_ = 72$

$72 \div \_\_\_\_ = \_\_\_\_$

$72 \div \_\_\_\_ = \_\_\_\_$

2. $7 \times \_\_\_\_ = 35$

$5 \times \_\_\_\_ = 35$

$35 \div \_\_\_\_ = \_\_\_\_$

$35 \div \_\_\_\_ = \_\_\_\_$

3. $9 \times \_\_\_\_ = 27$

$3 \times \_\_\_\_ = 27$

$27 \div \_\_\_\_ = \_\_\_\_$

$27 \div \_\_\_\_ = \_\_\_\_$

4. $6 \times \_\_\_\_ = 60$

$10 \times \_\_\_\_ = 60$

$60 \div \_\_\_\_ = \_\_\_\_$

$60 \div \_\_\_\_ = \_\_\_\_$

5. $\_\_\_\_ \times 7 = 28$

$7 \times \_\_\_\_ = 28$

$28 \div \_\_\_\_ = \_\_\_\_$

$28 \div \_\_\_\_ = \_\_\_\_$

6. $\_\_\_\_ \times 8 = 80$

$8 \times \_\_\_\_ = 80$

$80 \div \_\_\_\_ = \_\_\_\_$

$80 \div \_\_\_\_ = \_\_\_\_$

7. $\_\_\_\_ \times 6 = 54$

$6 \times \_\_\_\_ = 54$

$54 \div \_\_\_\_ = \_\_\_\_$

$54 \div \_\_\_\_ = \_\_\_\_$

8. $\_\_\_\_ \times 9 = 63$

$9 \times \_\_\_\_ = 63$

$63 \div \_\_\_\_ = \_\_\_\_$

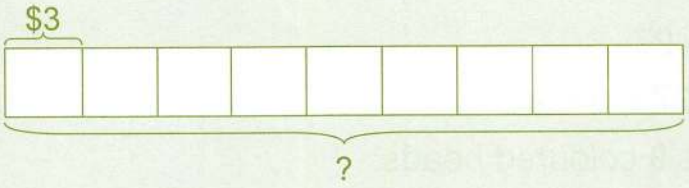
$63 \div \_\_\_\_ = \_\_\_\_$

Solve word problems related to multiplication and division

Do these word problems. Show your working clearly in the space provided. **[16 marks]**

Examples:

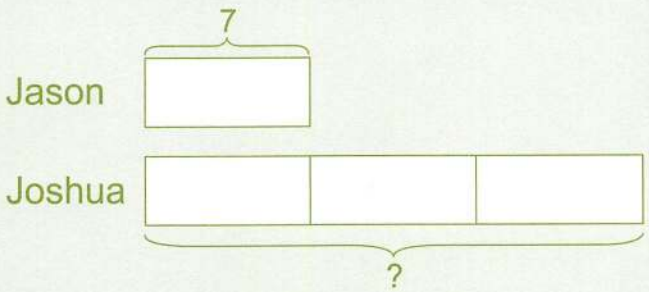
Mr Lee sold 9 bowls of noodles. If each bowl of noodles cost $3, how much money did Mr Lee collect?



$3 × 9 = $27

Mr Lee collected **$27**.

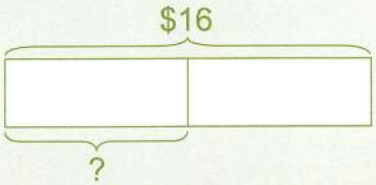
Jason has 7 stickers. Joshua has 3 times as many stickers as Jason. How many stickers does Joshua have?



7 × 3 = 21

Joshua has **21** stickers.

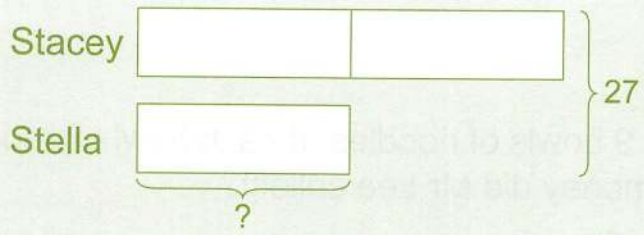
Mrs Perreria gives $16 equally to her two children. How much does each child get?



$16 ÷ 2 = $8

Each child gets **$8**.

Stacey and Stella have 27 coloured beads. If Stacey has twice as many coloured beads as Stella, how many coloured beads does Stella have?



3 units → 27

1 unit → 27 ÷ 3 = 9

Stella has **9** coloured beads.

1. Samantha bought 6 bags of oranges. There were 8 oranges in each bag. How many oranges did she buy altogether?

2. Jacky has 42 stickers. He shares these stickers with another 6 friends. How may stickers does each of them have?

3. There are 9 slices of bread on a tray. There are twice as many slices of cheese as bread on the tray. How many slices of cheese are there on the tray?

4. There are 40 cars and vans at a car park. If there are 4 times as many cars as vans, how many vans are there at the car park?

5. A group of people are going to the zoo by car. They need 7 cars altogether. If 5 people sit in each car, how many people are there in the group?

6. A fruiterer packs 36 apples equally into some baskets. If there are 4 apples in each basket, how many baskets of apples are there?

7. Alden has 6 bottle caps. Byron has 5 times as many bottle caps as Alden. How many bottle caps does Byron have?

8. Mrs Fields bakes 28 cookies and muffins. If she bakes 3 times as many cookies as muffins, how many muffins does she bake?

9. Susan uses 9 buttons to sew a dress. How many buttons does she use to sew 9 such dresses?

10. Mrs Arnold bought 64 apples. She put them equally into 8 bags. How many apples were there in each bag?

11. Stephanie saves $8 in a day. How much does she save in a week?

12. There are 54 patrons in a cinema. If there are 5 times as many adults as children, how many children are there in the cinema?

13. 10 volleyball teams compete in a tournament. If there are 6 players in each volleyball team, how many players are there altogether?

14. Mr Daniels packs 80 pens equally into boxes. If there are 10 pens in each box, how many boxes does Mr Daniels use?

15. There are 9 houses along a road. If there are 3 times as many trees as houses, how many trees are there along the road?

16. Caleb and Dora collect 24 seashells from the beach. If Dora collects twice as many seashells as Caleb, how many seashells does Caleb collect?

6 Multiplying Numbers

Multiply numbers without regrouping

Multiply these numbers. Show your working clearly. [10 marks]

Example:

$$\begin{array}{r} 12 \\ \times\ 4 \\ \hline 48 \\ \hline \end{array}$$

First, multiply the ones by 4:

$$\begin{array}{r} 1\ 2 \\ \times\ 4 \\ \hline 8 \\ \hline \end{array}$$

2 ones × 4 = 8 ones

Then, multiply the tens by 4:

$$\begin{array}{r} 1\ 2 \\ \times\ 4 \\ \hline 4\ 8 \\ \hline \end{array}$$

1 ten × 4 = 4 tens

So, 12 × 4 = 48.

1. $\begin{array}{r} 112 \\ \times\ 4 \\ \hline \\ \hline \end{array}$

2. $\begin{array}{r} 33 \\ \times\ 2 \\ \hline \\ \hline \end{array}$

3. $\begin{array}{r} 210 \\ \times\ 2 \\ \hline \\ \hline \end{array}$

4. $\begin{array}{r} 302 \\ \times\ 3 \\ \hline \\ \hline \end{array}$

5. $\begin{array}{r} 442 \\ \times\ 2 \\ \hline \\ \hline \end{array}$

6. $\begin{array}{r} 212 \\ \times\ 4 \\ \hline \\ \hline \end{array}$

7. $\begin{array}{r} 31 \\ \times\ 3 \\ \hline \\ \hline \end{array}$

8. $\begin{array}{r} 100 \\ \times\ 3 \\ \hline \\ \hline \end{array}$

9. $\begin{array}{r} 121 \\ \times\ 4 \\ \hline \\ \hline \end{array}$

10. $\begin{array}{r} 134 \\ \times\ 2 \\ \hline \\ \hline \end{array}$

Multiply numbers by regrouping ones, tens, hundreds and thousands

(A) Match each door to the correct house. **[5 marks]**

Example:

First, multiply the ones by 5:

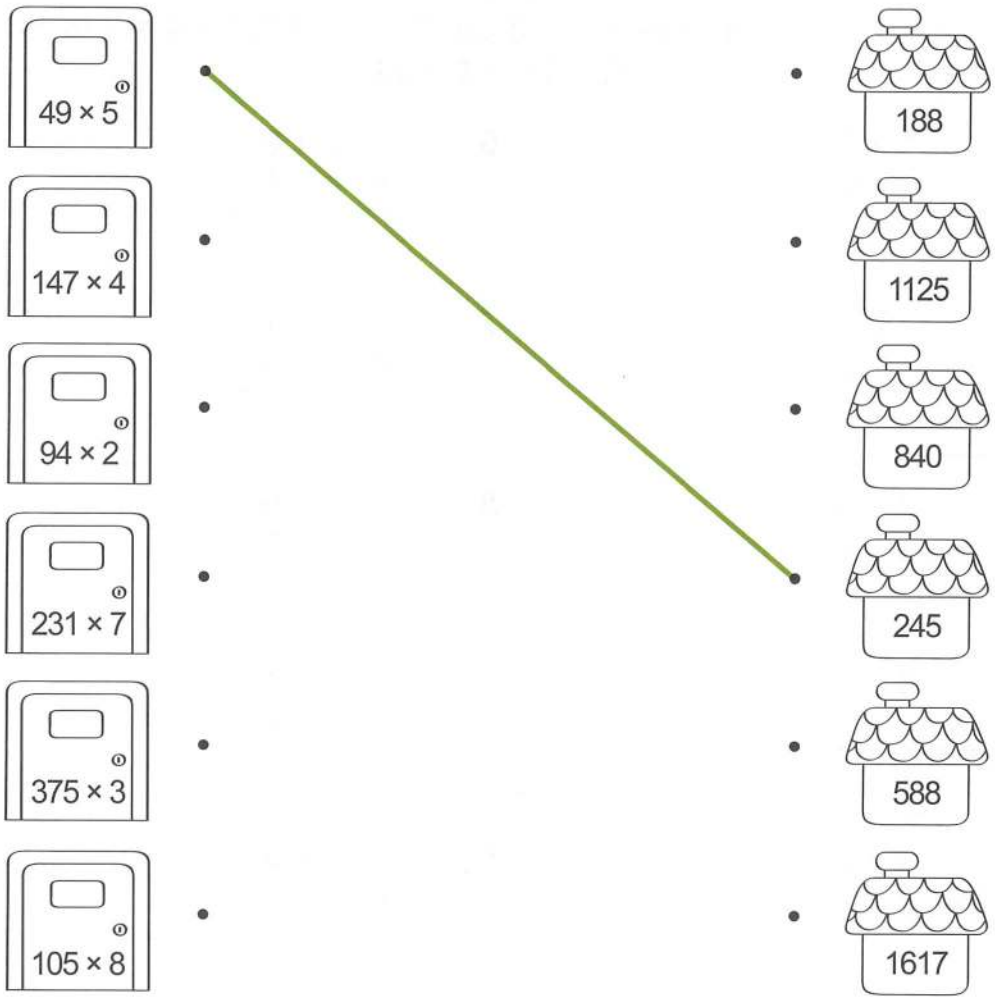
$$\begin{array}{r} {\scriptstyle 4}\,4\;9 \\ \times\quad 5 \\ \hline 2\;4\;5 \end{array}$$

9 ones × 5 = 45 ones
Regroup the ones:
45 ones = 4 tens 5 ones

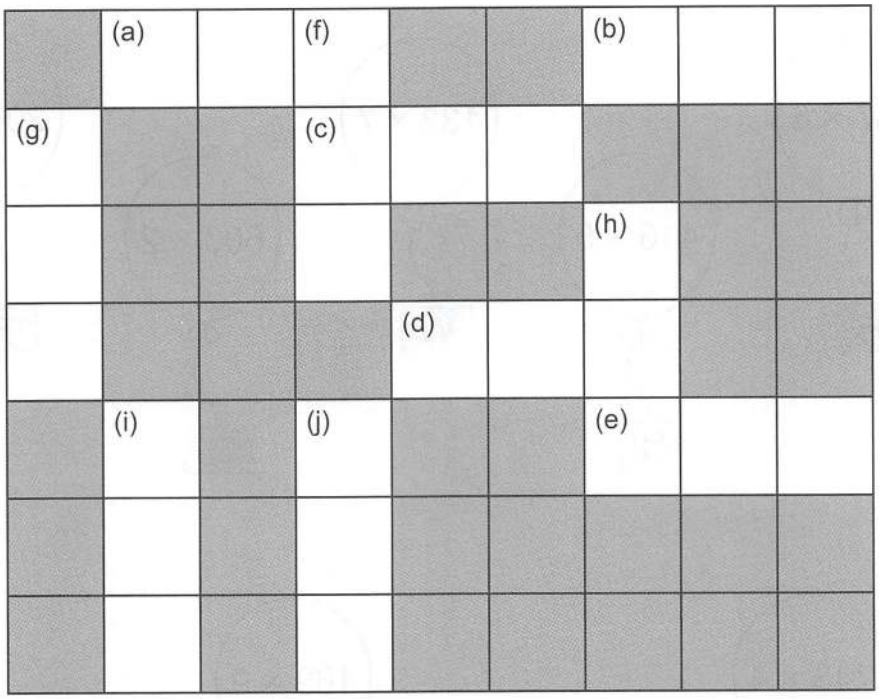
Then, multiply the tens by 5:

4 tens × 5 = 20 tens
Add the tens:
20 tens + 4 tens = 24 tens

So, 49 × 5 = 245.



(B) Fill in each box with the correct answer. [10 marks]



Across

(a) 112 × 8

(b) 79 × 9

(c) 62 × 5

(d) 214 × 4

(e) 118 × 7

Down

(f) 91 × 7

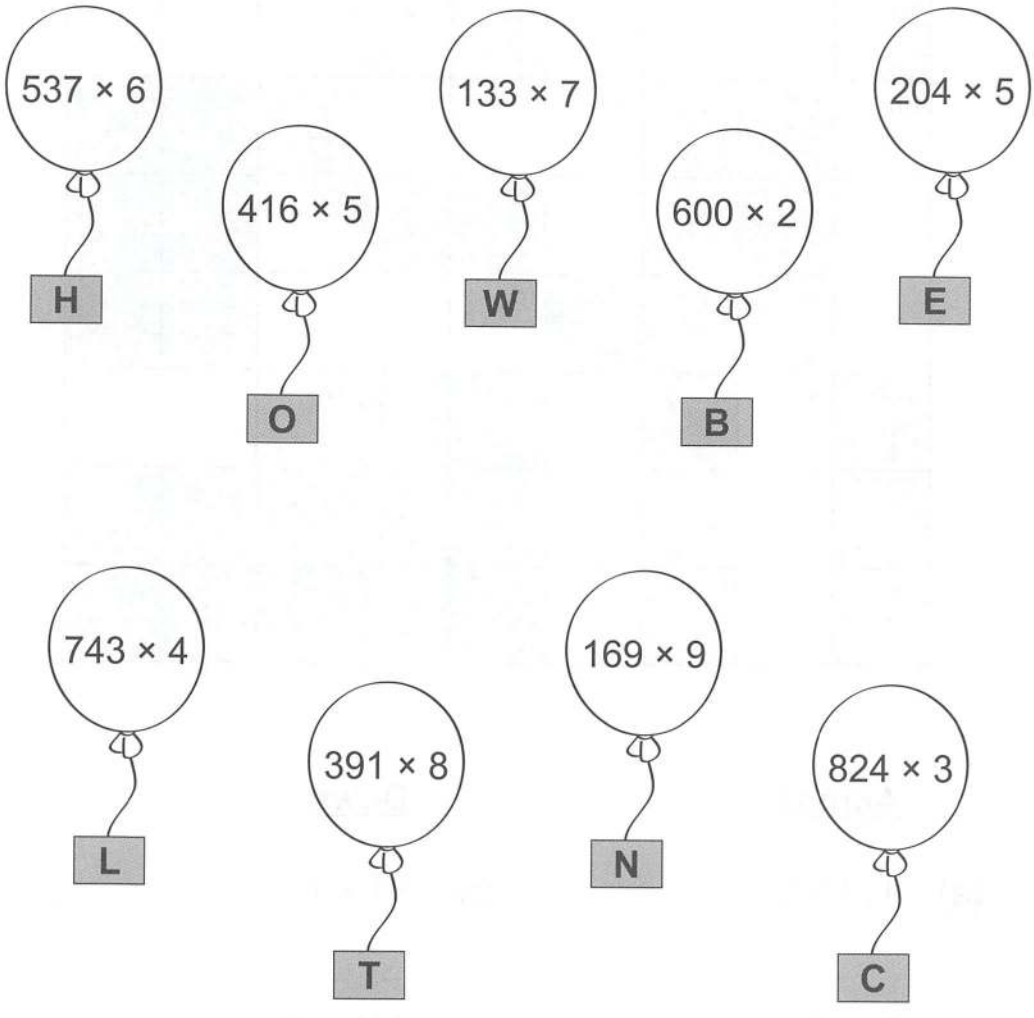
(g) 102 × 6

(h) 46 × 8

(i) 98 × 9

(j) 80 × 8

(C) Sandra is watching a circus performance with her family. Find out who her favourite star is. **[10 marks]**



1200	2080	1200	2080		3128	3222	1020

2472	2972	2080	931	1521

Do Review 3 to practise on Multiplying Numbers by 6, 7, 8 and 9 and Multiplying Numbers.
Go to **My SAPeducation App** or www.sapgrp.com

7 Dividing Numbers

Find quotient and remainder by dividing

(A) Divide these numbers. Show your working clearly. [10 marks]

Example:

$$2\overline{)13}\quad 6 \text{ ← quotient},\ 12,\ 1 \text{ ← remainder}$$

6 ones × 2 = 12 ones
12 ones + 1 one = 13 ones

Quotient: 6

Remainder: 1

We can write it as 13 ÷ 2 = 6 R 1.

1. $7\overline{)67}$

Quotient: _____

Remainder: _____

2. $5\overline{)17}$

Quotient: _____

Remainder: _____

3. $3\overline{)25}$

Quotient: _____

Remainder: _____

4. $9\overline{)88}$

Quotient: _____

Remainder: _____

5. $4\overline{)29}$

Quotient: _____

Remainder: _____

6. $6\overline{)52}$

Quotient: _____

Remainder: _____

7. $8\overline{)43}$

Quotient: _____

Remainder: _____

8. $7\overline{)58}$

Quotient: _____

Remainder: _____

9. $5\overline{)33}$

Quotient: _____

Remainder: _____

10. $6\overline{)29}$

Quotient: _____

Remainder: _____

(B) Divide these numbers. Show your working clearly. [5 marks]

1. $4\overline{)469}$

Quotient: _____

Remainder: _____

2. $3\overline{)947}$

Quotient: _____

Remainder: _____

3. $4\overline{)671}$

Quotient: _____

Remainder: _____

4. $5\overline{)784}$

Quotient: _____

Remainder: _____

5. $6\overline{)983}$

Quotient: _____

Remainder: _____

(C) Bryan is buying a birthday present for his brother. Divide these numbers to find out what present he is getting for his brother. **[5 marks]**

$2\overline{)17}$

$6\overline{)43}$

$8\overline{)55}$

$4\overline{)38}$

$7\overline{)60}$

Bryan's birthday present for his brother is a

☐	☐	☐	☐	☐	☐
8 R 4	9 R 2	8 R 1	6 R 7	7 R 1	9 R 2

[1 mark]

Divide numbers without regrouping

(A) Divide these numbers mentally. **[12 marks]**

1. $8 \div 2 =$ _____
   $80 \div 2 =$ _____
   $800 \div 2 =$ _____

2. $6 \div 3 =$ _____
   $60 \div 3 =$ _____
   $600 \div 3 =$ _____

3. $8 \div 4 =$ _____
   $80 \div 4 =$ _____
   $800 \div 4 =$ _____

4. $10 \div 5 =$ _____
   $100 \div 5 =$ _____
   $1000 \div 5 =$ _____

(B) Divide these numbers. Show your working clearly. **[10 marks]**

Example:

$$2\overline{)24}\quad \text{quotient: } 12$$

First, divide the tens by 2:

$$2\overline{)24}\quad \text{quotient: } 1,\ \text{remainder: } 2$$

Then, divide the ones by 2:

$$\begin{array}{r} 12 \\ 2\overline{)24} \\ \underline{2} \\ 4 \\ \underline{4} \\ 0 \end{array}$$

2 tens ÷ 2 = 1 ten

4 ones ÷ 2 = 2 ones

So, 24 ÷ 2 = 12.

1. $2\overline{)28}$

2. $3\overline{)36}$

3. $6\overline{)66}$

4. $2\overline{)46}$

5. $3\overline{)69}$

6. $4\overline{)84}$

7. $2\overline{)62}$

8. $3\overline{)96}$

9. $8\overline{)88}$

10. $2\overline{)84}$

(C) Divide these numbers. Show your working clearly. [5 marks]

1. $2\overline{)202}$

2. $2\overline{)440}$

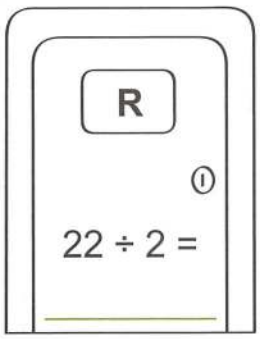
3. $2\overline{)864}$

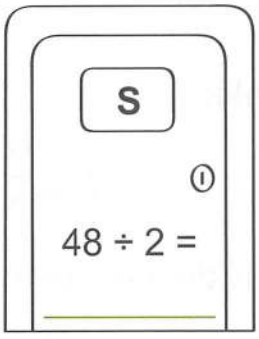
4. $3\overline{)639}$

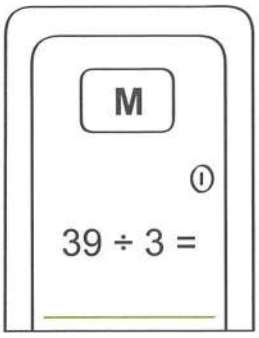
5. $4\overline{)488}$

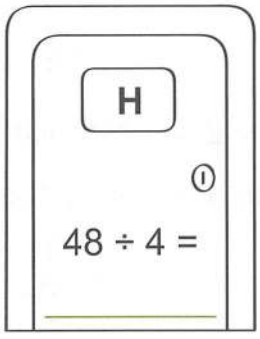
(D) Divide these numbers. Answer the question that follows.

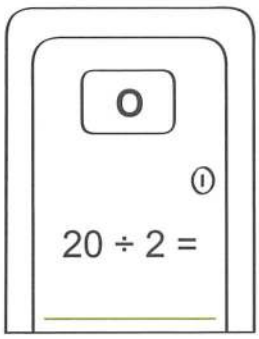
[6 marks]

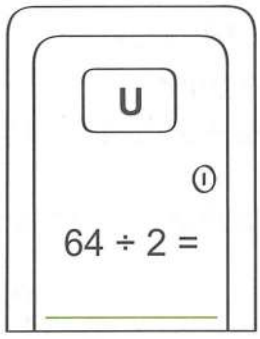












Which room has no door? **[1 mark]**

13	32	24	12	11	10	10	13

Divide numbers by regrouping hundreds, tens and ones

(A) Divide these numbers. Show your working clearly.

[10 marks]

Example:

$$2\overline{)32} \quad \text{quotient: } 16$$

First, divide the tens by 2:

$$2\overline{)32} \quad \text{quotient: } 1, \quad 2, \quad \text{remainder: } 1$$

3 tens ÷ 2 = 1 ten with remainder 1 ten

Regroup the remainder ten:

$$2\overline{)32} \quad \text{quotient: } 1, \quad 2, \quad \text{remainder: } 12$$

1 ten = 10 ones

Add the ones:

10 ones + 2 ones = 12 ones

Then, divide the ones by 2:

$$2\overline{)32} \quad \text{quotient: } 16, \quad 2, \quad 12, \quad 12, \quad 0$$

12 ones ÷ 2 = 6 ones

So, 32 ÷ 2 = 16.

1. $5\overline{)90}$

2. $3\overline{)84}$

3. $2\overline{)36}$

4. $4\overline{)76}$

5. $6\overline{)96}$

6. $7\overline{)98}$

7. $3\overline{)72}$

8. $5\overline{)75}$

9. $2\overline{)94}$

10. $4\overline{)68}$

(B) Divide these numbers. Show your working clearly. [5 marks]

1. $8\overline{)792}$

2. $7\overline{)637}$

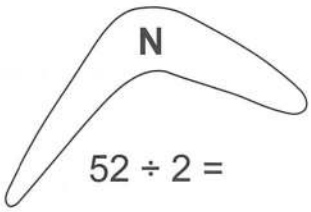
3. $6\overline{)138}$

4. $3\overline{)702}$

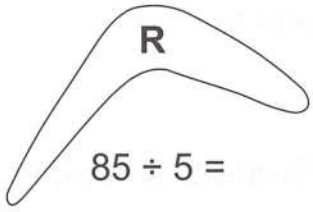
5. $9\overline{)972}$

(C) Divide these numbers. Answer the question that follows.

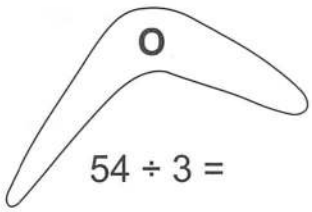
[6 marks]



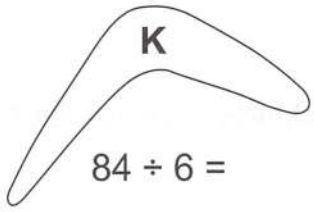
52 ÷ 2 = _____



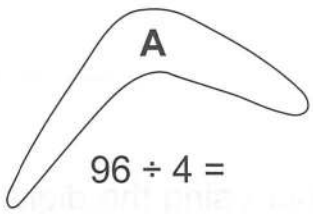
85 ÷ 5 = _____



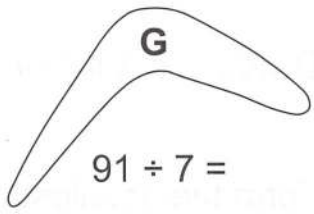
54 ÷ 3 = _____



84 ÷ 6 = _____



96 ÷ 4 = _____



91 ÷ 7 = _____

What jumps when it walks and sits when it stands? [1 mark]

14	24	26	13	24	17	18	18

(D) Fill in each blank with the correct answer. [10 marks]

1. (a) Form the greatest 3-digit even number using the digits 1, 4 and 9.

   _____

   (b) Divide this number by 2. _____

2. (a) Form the smallest 3-digit odd number using the digits 1, 2 and 6.

   _____

   (b) Divide this number by 3. _____

3. (a) Form the greatest 3-digit odd number using the digits 5, 8 and 7.

   _____

   (b) Divide this number by 4. _____

4. (a) Form the smallest 3-digit even number using the digits 9, 3 and 6.

   _____

   (b) Divide this number by 5. _____

5. (a) Form the greatest 3-digit even number using the digits 4, 7 and 1.

   _____

   (b) Divide this number by 6. _____

8 Two-Step Word Problems on the Four Operations

Solve two-step word problems related to addition, subtraction multiplication and division

Do these word problems. Show your working clearly in the space provided. [40 marks]

1. Samantha saved $135 in January. She saved twice as much in February. How much did Samantha save in the two months?

2. Troy plans to spend $280 equally over a week. If he spends $28 on Monday, how much money does he have left on that day?

3. 28 boys and 34 girls visited the library. Each of them borrowed 4 books.
   (a) How many students visited the library?
   (b) How many books did they borrow altogether?

4. Mr Johnson has a 100 m length of rope. He uses 52 m of it for his boat and cuts the remaining rope into 6 equal pieces. What is the length of each piece of rope?

5. Mrs Campbell buys 5 boxes of pencils. There are 24 pencils in each box.
   (a) How many pencils are there altogether?
   (b) If she gives 39 pencils to her students, how many pencils are left?

6. 111 marbles are shared equally among three boys – Andy, Barry and Corey.
   (a) How many marbles does each boy get?
   (b) If Andy is given 14 more marbles, how many marbles does he have now?

7. At a year-end sale, a $968 laptop computer now costs $49 less. If Mr Chan buys 4 such sets at the discounted price, how much does he have to pay in all?

8. 258 people visited an art exhibition in the morning. 267 people visited the exhibition in the afternoon.
   (a) How many people visited the exhibition altogether in the day?
   (b) If there were 4 times as many adults as children at the exhibition, how many children were there?

9. Steve earns $1375 a month. John earns $70 less than Steve. Paul earns twice as much as John.

(a) How much does John earn?

(b) How much does Paul earn?

10. There are 425 girls in a school. There are twice as many boys as girls.

(a) How many boys are there?

(b) How many students are there altogether?

11. Jason collected 312 stamps last month. He collected 68 more stamps this month.

(a) How many stamps did Jason collect this month?

(b) How many stamps would each friend get if Jason's collection for this month was given equally to two friends?

12. Sandra spends $175 on food every month. Jenny spends $159 on food every month.

(a) How much more money does Sandra spend on food than Jenny?

(b) How much more money does Sandra spend on food than Jenny in 6 months?

13. Johnson travels 98 km from his home to the city. He travels the same distance from the city back to home.

(a) How far does Johnson travel to and fro the city?

(b) Johnson has to travel to and fro the city every day in a week. How far will he travel in all?

14. Emelda saved $160 every month for half a year. She then bought 8 presents with that sum of money.

(a) How much did Emelda save in half a year?

(b) How much did she pay for each present if they cost the same?

15. Nelly sews 8 dresses in a week. Each dress uses 6 m of cloth.

(a) How much cloth does she use for the 8 dresses?

(b) If she buys 100 m of cloth, how much cloth has she left?

16. Kelly bought 9 packets of candy canes. There were 25 candy canes in each packet. If Kelly were to give 5 candy canes to each student, how many students did she have?

17. Linda bought 3 crates of apples. There were 24 apples in each crate. She then bought 245 oranges. How many fruit did she buy altogether?

18. A radio costs $95. A television set costs $190. If Ken buys two radios and a television set, how much does he need to pay in total?

19. Jack bought a chair for $75. He then bought a table that cost thrice as much as the chair. How much did Jack pay for the furniture?

20. Maria scored a total of 171 marks for English and Mathematics. The marks for English was twice that of Mathematics. How many marks did she score for English?

Do Review 4 to practise on Dividing Numbers and Two-Step Word Problems on the Four Operations.
Try the challenging Non-Routine Questions 1 for further application.
Go to **My SAPeducation App** or www.sapgrp.com
Test yourself! Do Revision Test 1 on units 1 to 8. Get your answers marked for Revision Test 1 by Geniebook! (See first page of book for instructions.)

9 Money

Add money in dollars and cents

(A) Write the amounts of money in dollars. **[10 marks]**

1. 15¢ = $_____
2. 105¢ = $_____
3. 400¢ = $_____
4. 950¢ = $_____
5. 825¢ = $_____
6. 70¢ = $_____
7. 220¢ = $_____
8. 345¢ = $_____
9. 505¢ = $_____
10. 610¢ = $_____

(B) Write the amounts of money in cents. **[10 marks]**

1. $2.90 = _____¢
2. $1.15 = _____¢
3. $4.05 = _____¢
4. $0.30 = _____¢
5. $0.05 = _____¢
6. $8.00 = _____¢
7. $7.65 = _____¢
8. $3.20 = _____¢
9. $5.50 = _____¢
10. $6.05 = _____ ¢

(C) Write the correct answers on the lines provided. [10 marks]

Example:

20 ¢ + 80 ¢ = $1

20¢ and 80¢ make $1.

1. 25¢ + _____ ¢ = $1

2. 50¢ + _____ ¢ = $1

3. 15¢ + _____ ¢ = $1

4. 90¢ + _____ ¢ = $1

5. 65¢ + _____ ¢ = $1

6. $0.30 + $ _____ = $1

7. $0.45 + $ _____ = $1

8. $0.05 + $ _____ = $1

9. $0.60 + $ _____ = $1

10. $0.75 + $ _____ = $1

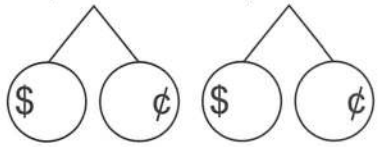
(D) Fill in each blank with the correct answer. [10 marks]

Example:

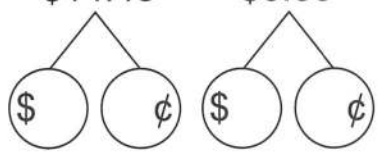
$5.35 + $3.00 = $ 8.35

First, add the dollars:
$5 + $3 = $8
Then, add the cents:
35¢ + 0¢ = 35¢
So, $8 + 35¢ = $8.35.

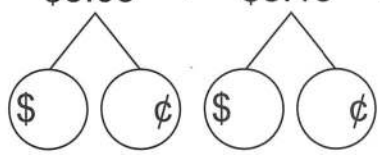
1. $4.00 + $2.25 = $_____



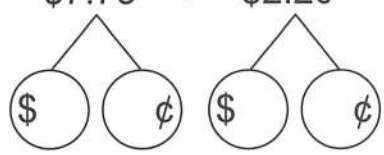
2. $14.45 + $6.00 = $_____



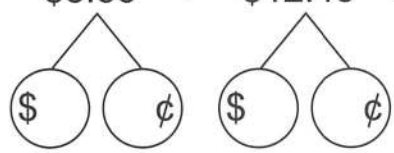
3. $3.05 + $5.15 = $_____



4. $7.75 + $2.20 = $_____



5. $8.35 + $12.45 = $_____



(E) Write the correct answers on the lines provided. [10 marks]

1. $6.00 + $10.95 = $_____

2. $43.20 + $8.00 = $_____

3. $14.00 + $90.75 = $_____

4. $30.00 + $68.90 = $_____

5. $9.05 + $0.55 = $_____

6. $24.00 + $0.90 = $_____

7. $0.80 + $70.00 = $_____

8. $82.40 + $6.80 = $_____

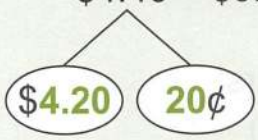
9. $53.60 + $2.25 = $_____

10. $43.50 + $1.80 = $_____

(F) Fill in each blank with the correct answer. [20 marks]

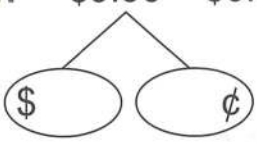
Example:

$4.40 + $0.80 = $ 5.20

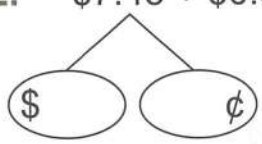


80¢ + 20¢ = $1
$4.20 + $1 = $5.20

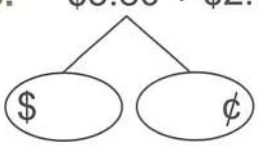
1. $9.90 + $0.50 = $_____



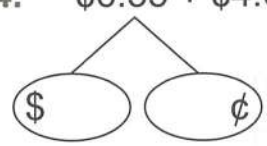
2. $7.45 + $0.95 = $_____



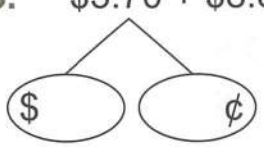
3. $5.80 + $2.75 = $_____



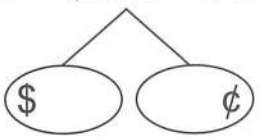
4. $6.55 + $4.60 = $_____



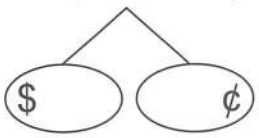
5. $3.70 + $8.85 = $_____



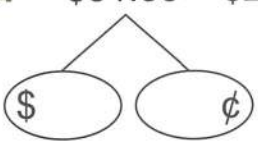
6. $2.25 + $12.75 = $_____



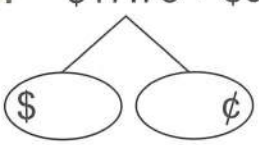
7. $33.50 + $44.50 = $_____



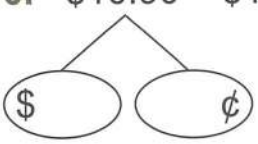
8. $51.35 + $29.65 = $_____



9. $17.75 + $0.30 = $_____



10. $10.90 + $11.95 = $_____



(G) Add these amounts. Show your working clearly. [10 marks]

Example:

$$\begin{array}{r} \$\ 23.50 \\ +\ \$\ 13.20 \\ \hline \$\ 36.70 \end{array}$$

First, add the cents:

$$\begin{array}{r} \$\ 23.\boxed{50} \\ +\ \$\ 13.\boxed{20} \\ \hline \$\quad\quad \boxed{70} \end{array}$$

50¢ + 20¢ = 70¢

Then, add the dollars:

$$\begin{array}{r} \$\ \boxed{23}.50 \\ +\ \$\ \boxed{13}.20 \\ \hline \$\ \boxed{36}.70 \end{array}$$

$23 + $13 = $36

So, $23.50 + $13.20 = $36.70.

1. $\begin{array}{r} \$\ 86.75 \\ +\ \$\ 37.45 \\ \hline \\ \hline \end{array}$

2. $\begin{array}{r} \$\ 515.55 \\ +\ \$\ \ 79.25 \\ \hline \\ \hline \end{array}$

3. $\begin{array}{r} \$\ 4.35 \\ +\ \$\ 0.90 \\ \hline \\ \hline \end{array}$

4. $\begin{array}{r} \$\ 73.20 \\ +\ \$\ 18.00 \\ \hline \\ \hline \end{array}$

5. $\begin{array}{r} \$\ 125.80 \\ +\ \$\ 214.40 \\ \hline \\ \hline \end{array}$

6. $\begin{array}{r} \$\ 217.00 \\ +\ \$\ 142.85 \\ \hline \\ \hline \end{array}$

7. $\begin{array}{r} \$\ 56.20 \\ +\ \$\ 64.15 \\ \hline \\ \hline \end{array}$

8. $\begin{array}{r} \$\ 49.70 \\ +\ \$\ 28.50 \\ \hline \\ \hline \end{array}$

9. $\begin{array}{r} \$\ 67.90 \\ +\ \$\ 17.70 \\ \hline \\ \hline \end{array}$

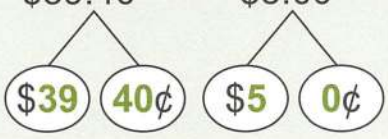
10. $\begin{array}{r} \$\ 378.65 \\ +\ \$\ 492.35 \\ \hline \\ \hline \end{array}$

Subtract money in dollars and cents

(A) Fill in each blank with the correct answer. **[10 marks]**

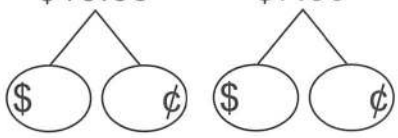
Example:

$39.40 – $5.00 = $ 34.40

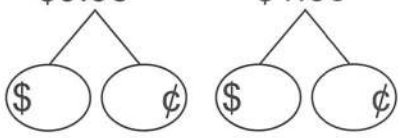


First, subtract the dollars:
$39 – $5 = $34
Then, subtract the cents:
40¢ – 0¢ = 40¢
So, $34 + 40¢ = $34.40.

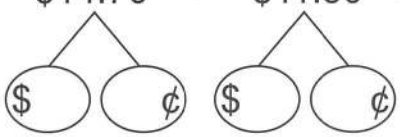
1. $10.65 – $7.00 = $_____



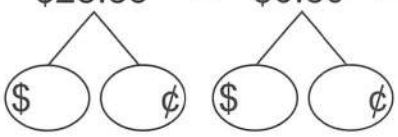
2. $9.95 – $1.50 = $_____



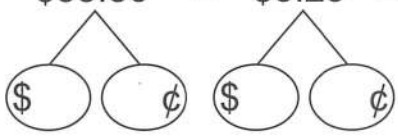
3. $14.70 – $11.30 = $_____



4. $28.85 – $0.80 = $_____



5. $35.50 – $5.25 = $_____



(B) Write the correct answers on the lines provided. [10 marks]

1. $25.90 – $0.80 = $_____

2. $78.55 – $4.00 = $_____

3. $36.70 – $0.60 = $_____

4. $82.75 – $0.20 = $_____

5. $48.60 – $0.45 = $_____

6. $99.50 – $0.35 = $_____

7. $87.30 – $4.10 = $_____

8. $69.55 – $3.35 = $_____

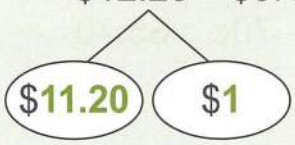
9. $92.60 – $1.30 = $_____

10. $58.80 – $7.50 = $_____

(C) Fill in each blank with the correct answer. [10 marks]

Example:

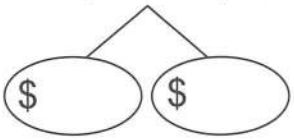
$12.20 – $0.40 = $ **11.80**



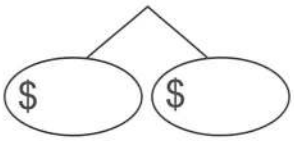
$1 – 40¢ = 60¢

$11.20 + 60¢ = $11.80

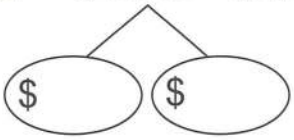
1. $9.10 – $0.60 = $_____



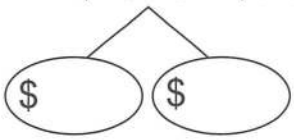
2. $7.05 – $0.70 = $_____



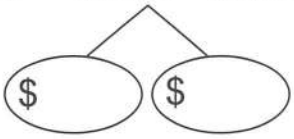
3. $10.30 – $0.55 = $_____



4. $15.45 – $0.90 = $_____



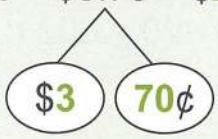
5. $8.25 – $0.65 = $_____



(D) Fill in each blank with the correct answer. [10 marks]

Example:

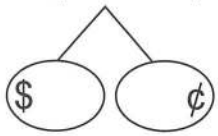
$9.40 – $3.70 = $ **5.70**



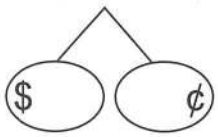
$9.40 – $3 = $6.40

$6.40 – 70¢ = $5.70

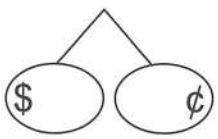
1. $11.50 – $1.80 = $_____



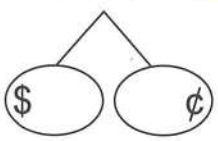
2. $39.10 – $8.90 = $_____



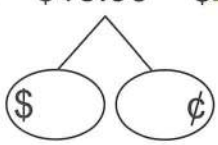
3. $6.55 – $2.60 = $_____



4. $25.20 – $7.75 = $_____



5. $18.35 – $13.95 = $_____



(E) Subtract these amounts. Show your working clearly.

[10 marks]

Example:

$$\begin{array}{r} \$\ 7.80 \\ -\ \$\ 3.50 \\ \hline \$\ 4.30 \end{array}$$

First, subtract the cents:

$$\begin{array}{r} \$\ 7.80 \\ -\ \$\ 3.50 \\ \hline \$\quad\ 30 \end{array}$$

80¢ – 50¢ = 30¢

Then, subtract the dollars:

$$\begin{array}{r} \$\ 7.80 \\ -\ \$\ 3.50 \\ \hline \$\ 4.30 \end{array}$$

$7 – $3 = $4

So, $7.80 – $3.50 = $4.30.

1. $\begin{array}{r} \$\ 50.00 \\ -\ \$\ \ 5.60 \\ \hline \end{array}$

2. $\begin{array}{r} \$\ 280.50 \\ -\ \$\ \ 66.60 \\ \hline \end{array}$

3. $\begin{array}{r} \$\ 23.10 \\ -\ \$\ \ 2.30 \\ \hline \end{array}$

4. $\begin{array}{r} \$\ 758.70 \\ -\ \$\ 329.40 \\ \hline \end{array}$

5. $\begin{array}{r} \$\ 143.05 \\ -\ \$\ \ 21.80 \\ \hline \end{array}$

6. $\begin{array}{r} \$\ 955.60 \\ -\ \$\ \ 89.45 \\ \hline \end{array}$

7. $\begin{array}{r} \$\ 49.25 \\ -\ \$\ \ 5.60 \\ \hline \end{array}$

8. $\begin{array}{r} \$\ 10.00 \\ -\ \$\ \ 3.45 \\ \hline \end{array}$

9. $\begin{array}{r} \$\ 659.20 \\ -\ \$\ \ 92.25 \\ \hline \end{array}$

10. $\begin{array}{r} \$\ 512.30 \\ -\ \$\ 467.85 \\ \hline \end{array}$

Solve word problems related to money

Do these word problems. Show your working clearly in the space provided.

Examples:

Bryan has $12.50. His mother gives him another $6.50. How much money does Bryan have now?

$12.50 + $6.50 = $19.00

Bryan has **$19** now.

A movie DVD costs $26.60. A music CD costs $13.95. How much more does the movie DVD cost than the music CD?

$26.60 – $13.95 = $12.65

The movie DVD costs **$12.65** more than the music CD.

1. Ashley buys a can of orange juice for $1.10 and a packet of rice for $3.50. How much does Ashley pay altogether? **[1 mark]**

2. Charlene bought a pair of shoes and two blouses for $75.35. If she gave the cashier $100, how much change would she receive? **[1 mark]**

3. Desmond gave $500 to his parents. His brother gave them $200 more than Desmond. How much did his parents receive altogether? **[2 marks]**

4. Sally spends $75.70 to pay her phone bill, $125 on transport and $360 on food every month. How much does she spend altogether every month? **[2 marks]**

5. Amanda pays $750 for a table and five similar chairs. If the table costs $200, how much do the chairs cost? **[1 mark]**

6. Beth saved $500 in January. She saved $350 in February. She needed to save $1000 in total by March. How much did Beth have to save in March? **[2 marks]**

7. Geraldine bought a soft toy for $34.90. She gave the shopkeeper 4 ten-dollar notes. How much change would she receive?

[1 mark]

8. After Andy had spent $80.35 and Aaron had spent $43.60, both had the same amount of money left.

   (a) If Andy had $19.65 left, how much money did Aaron have at first? **[1 mark]**

   (b) How much more money did Andy have than Aaron?

   [2 marks]

9. A bakery collected $218.50 on Friday. It collected twice as much money on Saturday and $64.45 less on Sunday than on Saturday.

(a) How much money did the bakery collect on Sunday?

[2 marks]

(b) How much money did the bakery collect in the three days?

[2 marks]

10. A blouse costs $49.90. A handbag costs $78.10 more than the blouse.

(a) How much does the handbag cost? **[1 mark]**

(b) Fiona buys a blouse and a handbag. If she pays the cashier $200, how much change will she receive? **[2 marks]**

10 Length, Mass and Volume

Express length in kilometres, metres or centimetres

(A) Express the following in centimetres. **[10 marks]**

Example: 4 m 34 cm

= 400 cm + 34 cm

= 434 cm

1. 1 m 10 cm

   = _____ cm + _____ cm

   = _____ cm

2. 5 m 5 cm

   = _____ cm + _____ cm

   = _____ cm

3. 6 m 56 cm

   = _____ cm + _____ cm

   = _____ cm

4. 2 m 92 cm

   = _____ cm + _____ cm

   = _____ cm

5. 8 m 8 cm

   = _____ cm + _____ cm

   = _____ cm

6. 4 m 3 cm

   = _____ cm + _____ cm

   = _____ cm

7. 7 m 89 cm

   = _____ cm + _____ cm

   = _____ cm

8. 3 m 40 cm

   = _____ cm + _____ cm

   = _____ cm

9. 9 m 45 cm

   = _____ cm + _____ cm

   = _____ cm

10. 5 m 11 cm

    = _____ cm + _____ cm

    = _____ cm

(B) Express the following in metres and centimetres. [10 marks]

Example:

323 cm

= 300 cm + 23 cm

= 3 m 23 cm

1. 101 cm

   = _____ cm + _____ cm

   = _____ m _____ cm

2. 710 cm

   = _____ cm + _____ cm

   = _____ m _____ cm

3. 805 cm

   = _____ cm + _____ cm

   = _____ m _____ cm

4. 978 cm

   = _____ cm + _____ cm

   = _____ m _____ cm

5. 390 cm

   = _____ cm + _____ cm

   = _____ m _____ cm

6. 521 cm

   = _____ cm + _____ cm

   = _____ m _____ cm

7. 606 cm

   = _____ cm + _____ cm

   = _____ m _____ cm

8. 759 cm

   = _____ cm + _____ cm

   = _____ m _____ cm

9. 432 cm

   = _____ cm + _____ cm

   = _____ m _____ cm

10. 212 cm

    = _____ cm + _____ cm

    = _____ m _____ cm

(C) Express the following in metres. [10 marks]

Example:

3 km 850 m

= 3000 m + 850 m

= 3850 m

1. 1 km 70 m

   = _____ m + _____ m

   = _____ m

2. 6 km

   = _____ m + _____ m

   = _____ m

3. 9 km 220 m

   = _____ m + _____ m

   = _____ m

4. 5 km 500 m

   = _____ m + _____ m

   = _____ m

5. 7 km 3 m

   = _____ m + _____ m

   = _____ m

6. 9 km 90 m

   = _____ m + _____ m

   = _____ m

7. 3 km 456 m

   = _____ m + _____ m

   = _____ m

8. 2 km 323 m

   = _____ m + _____ m

   = _____ m

9. 1 km 309 m

   = _____ m + _____ m

   = _____ m

10. 8 km 888 m

    = _____ m + _____ m

    = _____ m

(D) Express the following in kilometres and metres. [10 marks]

Example:

1456 m

= 1000 m + 456 m

= 1 km 456 m

1. 6830 m

   = _____ m + _____ m

   = _____ km _____ m

2. 1000 m

   = _____ m + _____ m

   = _____ km _____ m

3. 6592 m

   = _____ m + _____ m

   = _____ km _____ m

4. 9225 m

   = _____ m + _____ m

   = _____ km _____ m

5. 4050 m

   = _____ m + _____ m

   = _____ km _____ m

6. 8003 m

   = _____ m + _____ m

   = _____ km _____ m

7. 2006 m

   = _____ m + _____ m

   = _____ km _____ m

8. 3100 m

   = _____ m + _____ m

   = _____ km _____ m

9. 7707 m

   = _____ m + _____ m

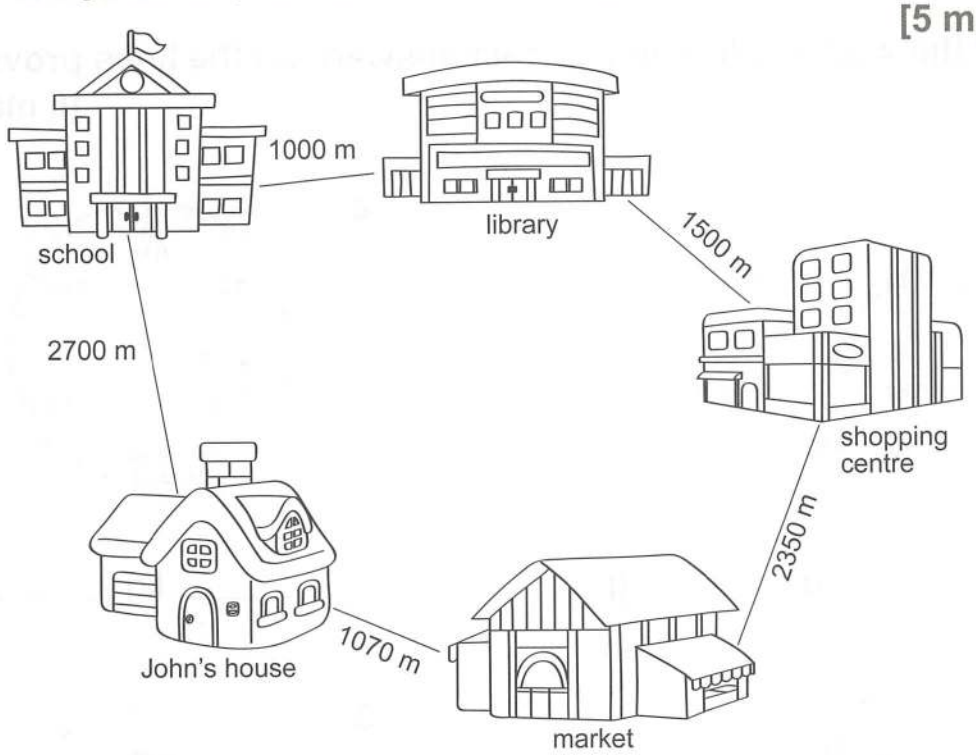
   = _____ km _____ m

10. 5055 m

    = _____ m + _____ m

    = _____ km _____ m

(E) Study the map below and answer the following questions. [5 marks]



1. The school is _____ m away from John's house.

   It is _____ km _____ m away from John's house.

2. The market is _____ m away from the shopping centre.

   It is _____ km _____ m away from the shopping centre.

3. The shopping centre is _____ m away from the library.

   It is _____ km _____ m away from the library.

4. The market is _____ m away from John's house.

   It is _____ km _____ m away from John's house.

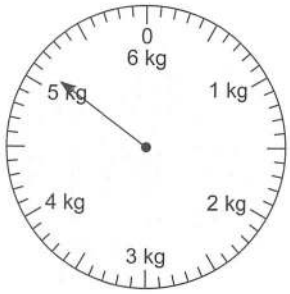
5. The school is _____ m away from the library.

   It is _____ km _____ m away from the library.

Read the correct mass on scales

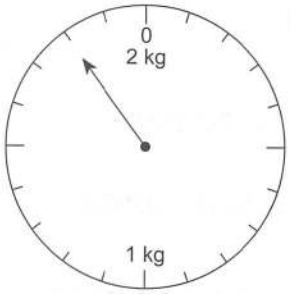
Read the scales. Write the correct answers on the lines provided. [6 marks]

1.



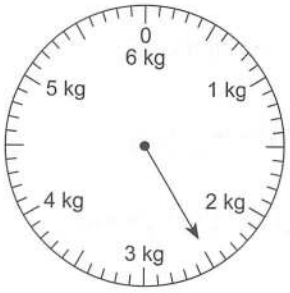
_____ kg _____ g

2.



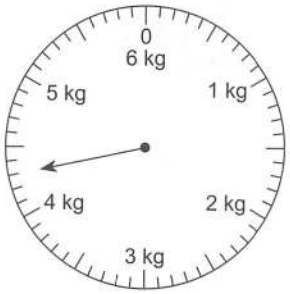
_____ kg _____ g

3.



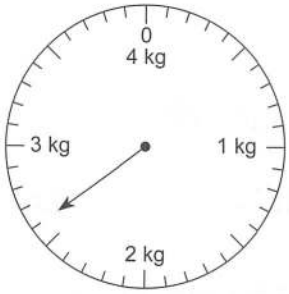
_____ kg _____ g

4.



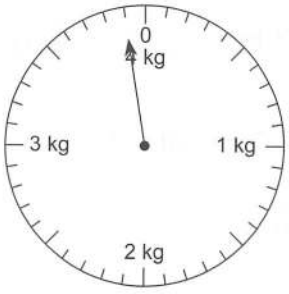
_____ kg _____ g

5.



_____ kg _____ g

6.



_____ kg _____ g

Express mass in kilograms and grams

(A) Express the following in grams. **[10 marks]**

Example:

1 kg 100 g

= 1000 g + 100 g

= 1100 g

1. 1 kg 238 g

   = _____ g + _____ g

   = _____ g

2. 3 kg 300 g

   = _____ g + _____ g

   = _____ g

3. 9 kg 569 g

   = _____ g + _____ g

   = _____ g

4. 5 kg 955 g

   = _____ g + _____ g

   = _____ g

5. 7 kg 67 g

   = _____ g + _____ g

   = _____ g

6. 6 kg 60 g

   = _____ g + _____ g

   = _____ g

7. 4 kg 8 g

   = _____ g + _____ g

   = _____ g

8. 8 kg 642 g

   = _____ g + _____ g

   = _____ g

9. 2 kg 484 g

   = _____ g + _____ g

   = _____ g

10. 3 kg 102 g

    = _____ g + _____ g

    = _____ g

(B) Express the following in kilograms and grams. [10 marks]

Example:

1369 g

= 1000 g + 369 g

= 1 kg 369 g

1. 4820 g

   = _____ g + _____ g

   = _____ kg _____ g

2. 7997 g

   = _____ g + _____ g

   = _____ kg _____ g

3. 6606 g

   = _____ g + _____ g

   = _____ kg _____ g

4. 8009 g

   = _____ g + _____ g

   = _____ kg _____ g

5. 3033 g

   = _____ g + _____ g

   = _____ kg _____ g

6. 5115 g

   = _____ g + _____ g

   = _____ kg _____ g

7. 8780 g

   = _____ g + _____ g

   = _____ kg _____ g

8. 2200 g

   = _____ g + _____ g

   = _____ kg _____ g

9. 9090 g

   = _____ g + _____ g

   = _____ kg _____ g

10. 1001 g

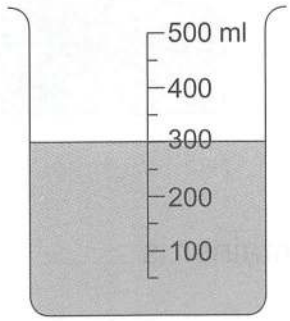
    = _____ g + _____ g

    = _____ kg _____ g

Read the and draw correct volume in measuring beakers

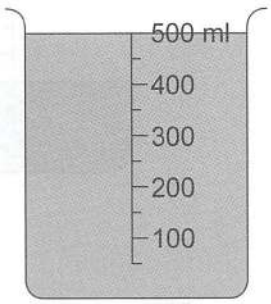
(A) For each question, look at the measuring beaker(s) carefully. They are used to fill different containers. Write the correct volume of the container in each blank. [6 marks]

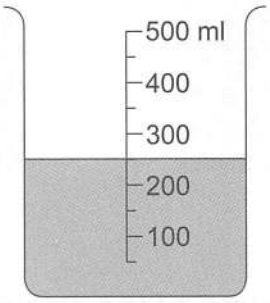
1.



The volume of the container is _____ ml.

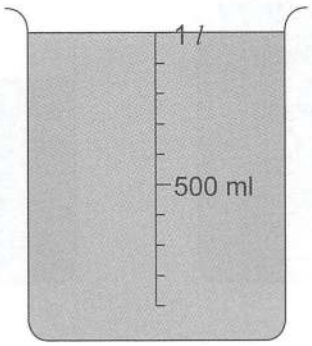
2.

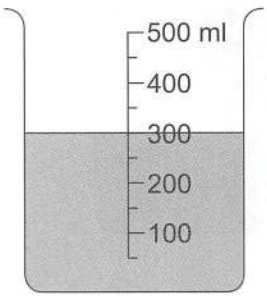




The volume of the container is _____ ml.

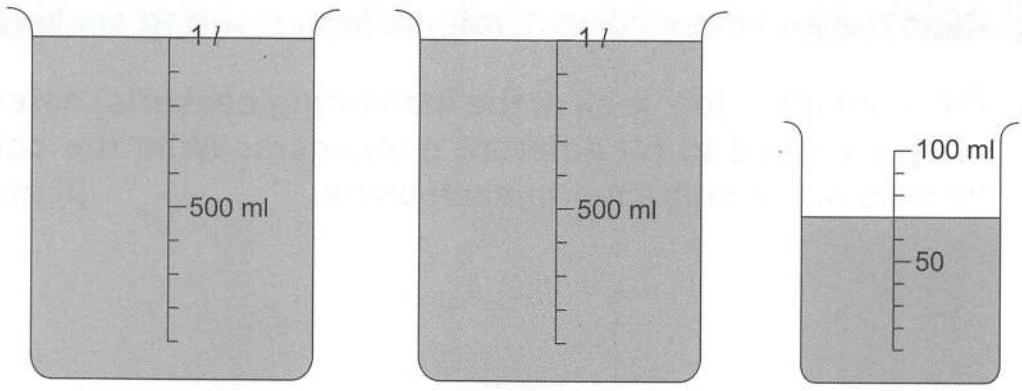
3.





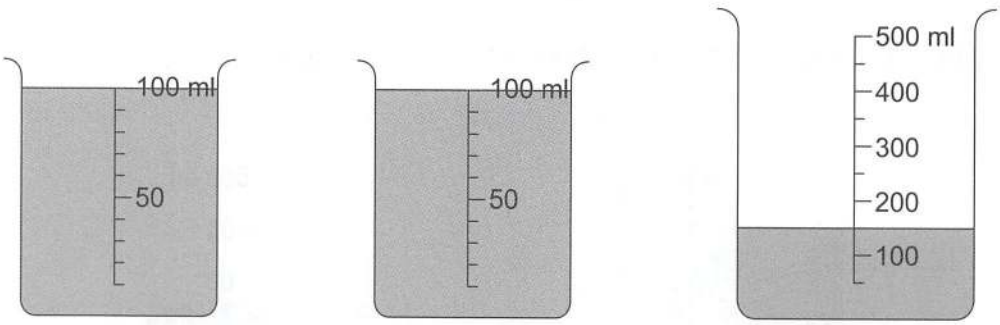
The volume of the container is _____ *l* _____ ml.

4.



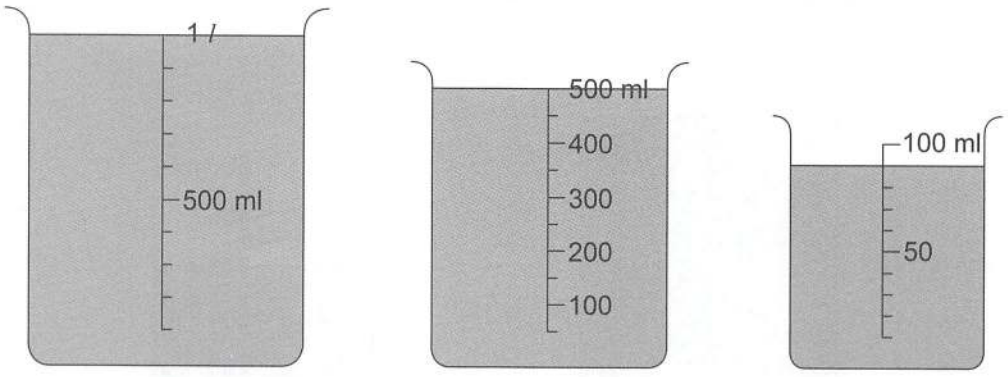
The volume of the container is _____ *l* _____ ml.

5.



The volume of the container is _____ ml.

6.

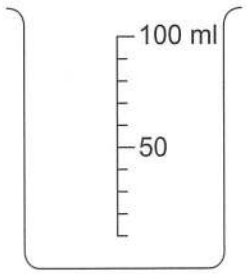


The volume of the container is _____ *l* _____ ml.

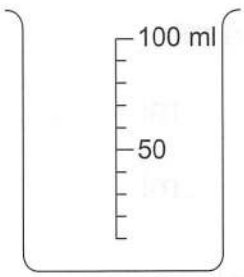
(B) Draw the correct level of liquid for each measuring beaker.

[6 marks]

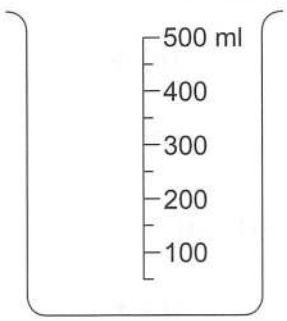
1. 30 ml



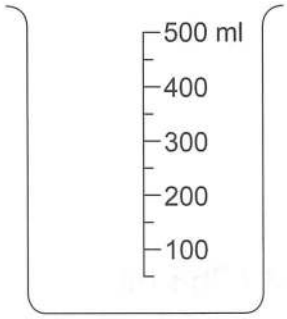
2. 80 ml



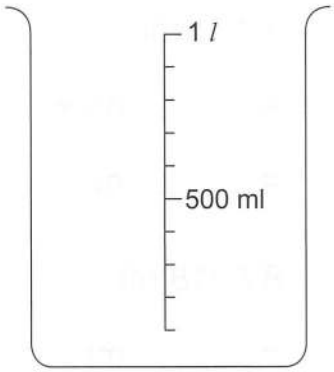
3. 250 ml



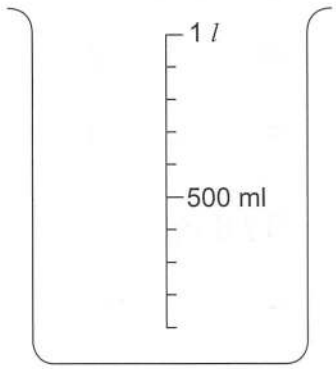
4. 450 ml



5. 200 ml



6. 600 ml



Express volume in litres and millilitres

(A) Express the following in millilitres. **[10 marks]**

Example:

1 *l* 50 ml

= 1000 ml + 50 ml

= 1050 ml

1. 4 *l* 368 ml

   = _____ ml + _____ ml

   = _____ ml

2. 1 *l* 11 ml

   = _____ ml + _____ ml

   = _____ ml

3. 8 *l* 818 ml

   = _____ ml + _____ ml

   = _____ ml

4. 2 *l* 202 ml

   = _____ ml + _____ ml

   = _____ ml

5. 3 *l* 8 ml

   = _____ ml + _____ ml

   = _____ ml

6. 8 *l* 96 ml

   = _____ ml + _____ ml

   = _____ ml

7. 7 *l* 478 ml

   = _____ ml + _____ ml

   = _____ ml

8. 9 *l* 9 ml

   = _____ ml + _____ ml

   = _____ ml

9. 5 *l* 555 ml

   = _____ ml + _____ ml

   = _____ ml

10. 6 *l* 330 ml

    = _____ ml + _____ ml

    = _____ ml

(B) Express the following in litres and millilitres. [10 marks]

Example:

4352 ml

= 4000 ml + 352 ml

= 4 *l* 352 ml

1. 9909 ml

   = _____ ml + _____ ml

   = _____ *l* _____ ml

2. 3100 ml

   = _____ ml + _____ ml

   = _____ *l* _____ ml

3. 8702 ml

   = _____ ml + _____ ml

   = _____ *l* _____ ml

4. 2000 ml

   = _____ ml + _____ ml

   = _____ *l* _____ ml

5. 5015 ml

   = _____ ml + _____ ml

   = _____ *l* _____ ml

6. 7007 ml

   = _____ ml + _____ ml

   = _____ *l* _____ ml

7. 6060 ml

   = _____ ml + _____ ml

   = _____ *l* _____ ml

8. 4044 ml

   = _____ ml + _____ ml

   = _____ *l* _____ ml

9. 1100 ml

   = _____ ml + _____ ml

   = _____ *l* _____ ml

10. 9898 ml

    = _____ ml + _____ ml

    = _____ *l* _____ ml

Solve word problems related to length, mass and volume

Do these word problems. Show your working clearly in the space provided.

1. A pole is longer than a wooden plank by 88 cm. If the length of the pole is 325 cm, what is the length of the wooden plank? **[1 mark]**

2. A ribbon of length 840 cm is cut into 5 equal pieces. What is the length of each piece of ribbon? **[1 mark]**

3. Johnson's mass is 38 kg and Benson's mass is 37 kg. What is their total mass? **[1 mark]**

4. Susan mixed some flour with butter. The mixture had a mass of 3000 g. If she had used 900 g of butter, how much flour did she use? Express your answer in kilograms and grams. **[1 mark]**

5. Mandy prepares 10 360 ml of bandung. If she uses 7900 ml of rose syrup, how much milk does she add? **[1 mark]**

6. Sharon fills her car up with petrol at the beginning of the week. Her car has a tank capacity of 40 *l*. How much petrol has she used up if there is 18 *l* of petrol left in her tank at the end of the week? **[1 mark]**

7. Mrs Drew bought a pack of biscuits. The mass of the pack of biscuits was 1800 g. She packed the biscuits into 3 equal bags. What was the mass of each bag of biscuits? **[1 mark]**

8. Grace bought a dozen similar cans of orange juice. If the capacity of each can of orange juice was 550 ml, how much orange juice did she buy? Express your answer in litres and millilitres. **[1 mark]**

9. The total length of three sticks is 555 cm. If two of the sticks measure 272 cm in all, what is the length of the third stick? Express your answer in metres and centimetres. **[1 mark]**

10. A chair has a mass of 2700 g. A table has a mass of 3960 g. How much heavier is the table than the chair? **[1 mark]**

11. The length of a garden is 8 m and its breadth is 6 m. If John wants to put up a fence around the garden, how long will the fence be? **[1 mark]**

12. Bob's sack of goods has a mass of 4870 g. His sack of goods is 3560 g heavier than Andy's. What is the mass of the two sacks of goods? Express your answer in kilograms and grams. **[2 marks]**

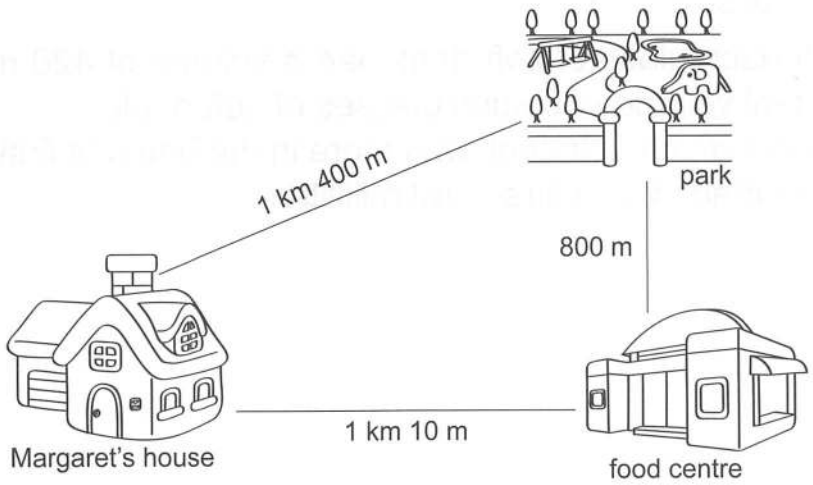
13. A fishmonger sold 30 960 g of fish on Saturday. He sold 10 040 g of fish on Sunday. How much fish did he sell on both days? Express your answer in kilograms and grams. **[1 mark]**

14. Stanley bought 8300 ml of paint. Edward bought 6970 ml less paint than Stanley. How much paint did they buy altogether? **[2 marks]**

15. Kelly used 125 g of flour to make pastries. Her sister used 5 times as much flour to bake cakes. How much more flour did her sister use than Kelly? **[1 mark]**

16. Tree A is 135 cm tall. Tree B is 3 times as tall as Tree A. What is the total height of both trees? **[1 mark]**

17.



Margaret walked from her house to the park and then to the food centre. She then walked her way home from the food centre. What was the total distance Margaret had walked? Express your answer in kilometres and metres. **[2 marks]**

18. Jake uses 6500 ml of water on Monday. His brother uses 2765 ml of water more than Jake. How much water do both of them use? Express your answer in litres and millilitres. **[2 marks]**

19. Joshua poured a bottle of soft drink into 8 glasses and is left with 250 ml of soft drink.

(a) If each glass of soft drink had a volume of 420 ml, find the total volume of 8 such glasses of soft drink. **[1 mark]**

(b) How much soft drink was there in the bottle at first? Express your answer in litres and millilitres. **[1 mark]**

20. A waiter filled some pots to the brim with coffee. Each pot could hold 2 *l* of coffee.

(a) If the waiter had 14 *l* of coffee, how many such pots of coffee could he fill? **[1 mark]**

(b) If the waiter had 2 pots of coffee left after breakfast, how many pots of coffee were used? **[1 mark]**

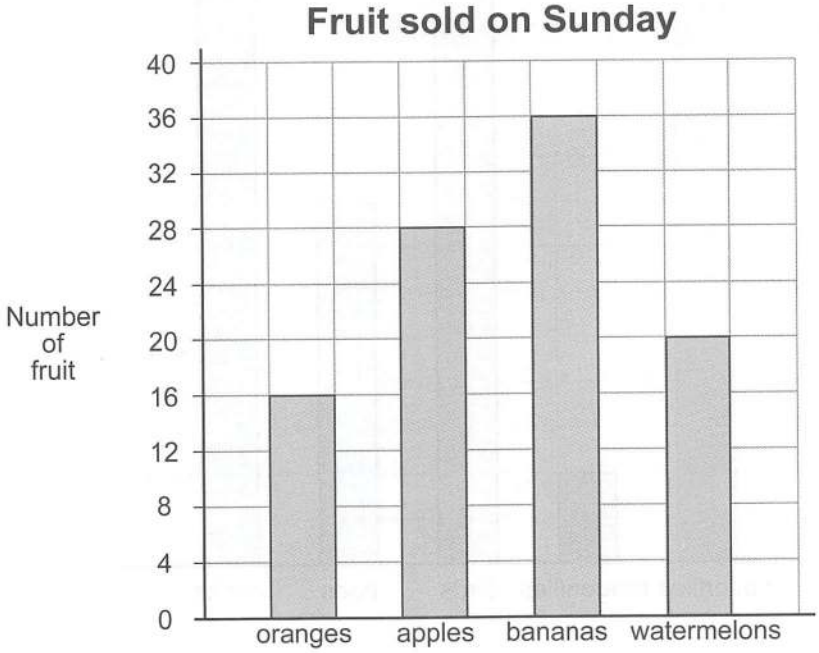
Do Review 5 to practise on Money and Length, Mass and Volume.
Go to **My SAPeducation App** or www.sapgrp.com

11 Bar Graphs

Read and interpret data from bar graphs

Study the bar graphs and fill in the blanks with the correct answers.

1. A fruiterer sold some fruit on one Sunday. He recorded the number of fruit he had sold in the bar graph below.



(a) _____ apples were sold.

(b) The fruiterer sold the most number of _____.

(c) The fruiterer sold the least number of _____.

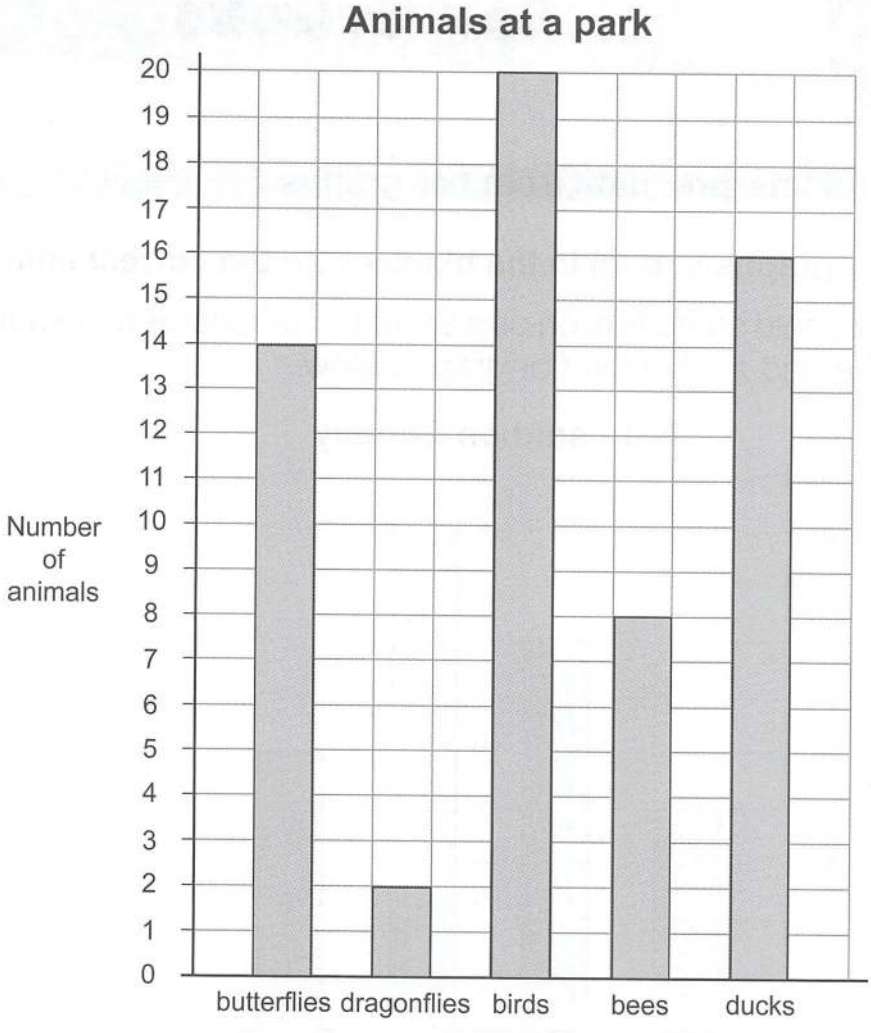
(d) He sold _____ more bananas than oranges.

(e) He sold _____ more apples than watermelons.

(f) The total number of fruit sold on that Sunday was _____.

[6 marks]

2. Angeline and her sister went to a park. They drew a bar graph of what they had seen at the park.



(a) They saw _____ birds.

(b) There were _____ more ducks than butterflies.

(c) There were _____ fewer bees than birds.

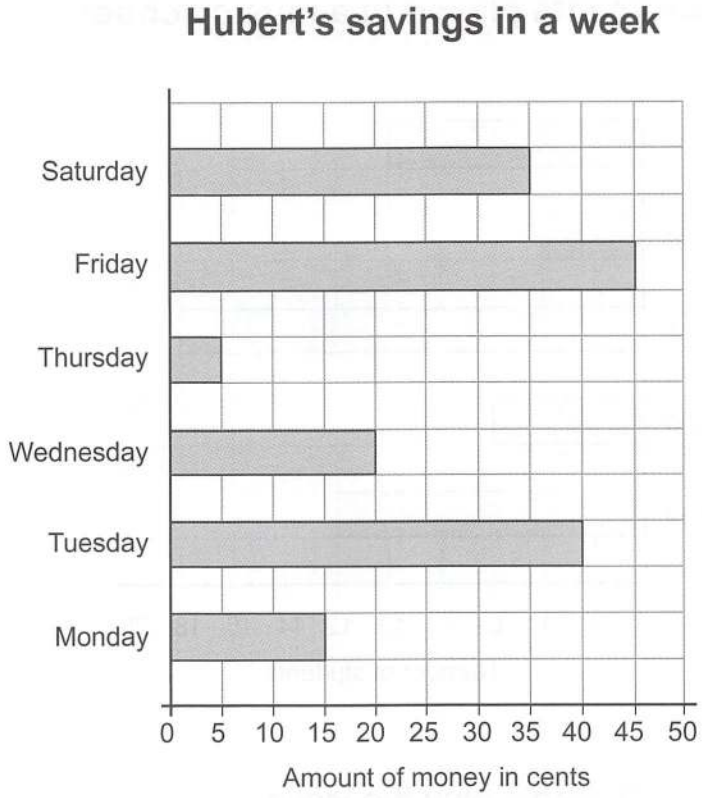
(d) They saw the least number of _____.

(e) They saw the most number of _____.

(f) There were _____ animals altogether at the park.

[6 marks]

3. Hubert saved some money in a week. He recorded the amount of money he had saved in the bar graph below.



(a) He saved _____ cents on Friday.

(b) He saved _____ cents more on Tuesday than on Monday.

(c) He saved 7 times more on Saturday than on _____.

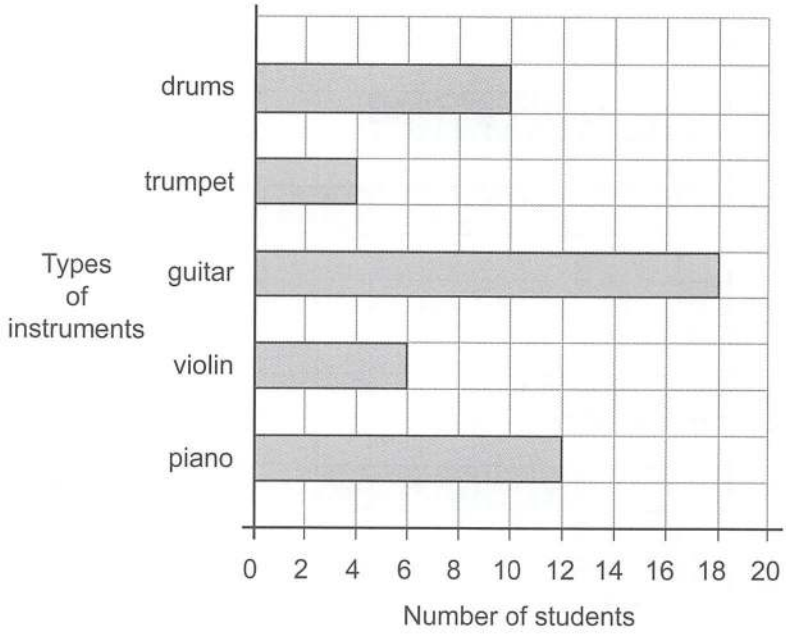
(d) He saved $_____ altogether in a week.

(e) Hubert needed $10 to buy a present for his mother. He would need to save $_____ more.

[5 marks]

4. The bar graph below illustrates the different types of instruments played by the students in a music school.

Instruments played in a music school



(a) _____ students play the violin.

(b) _____ students play the drums.

(c) _____ more students play the guitar than the trumpet.

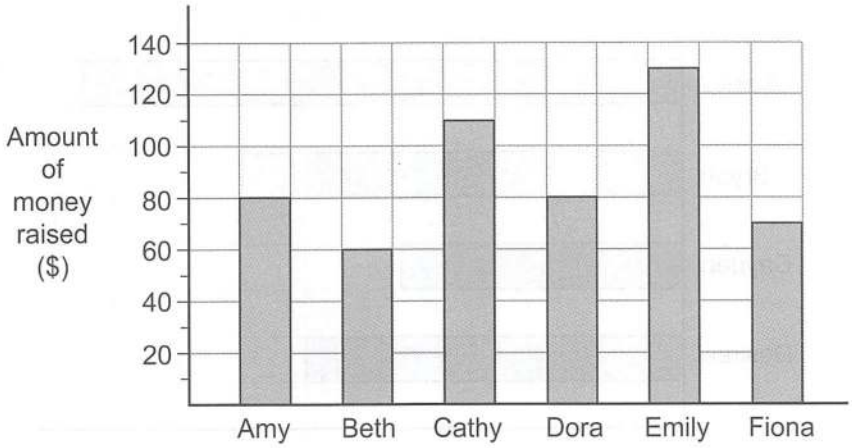
(d) _____ fewer students play the piano than the guitar.

(e) There are _____ students in the music school.

[5 marks]

5. A group of friends sold flowers to raise money for charity. The bar graph below shows the amount of money they raised.

Money raised for charity



(a) Cathy raised _____.

(b) Fiona raised _____.

(c) _____ and _____ raised the same amount of money.

(d) The difference between the highest amount of money raised and the lowest amount of money raised is _____.

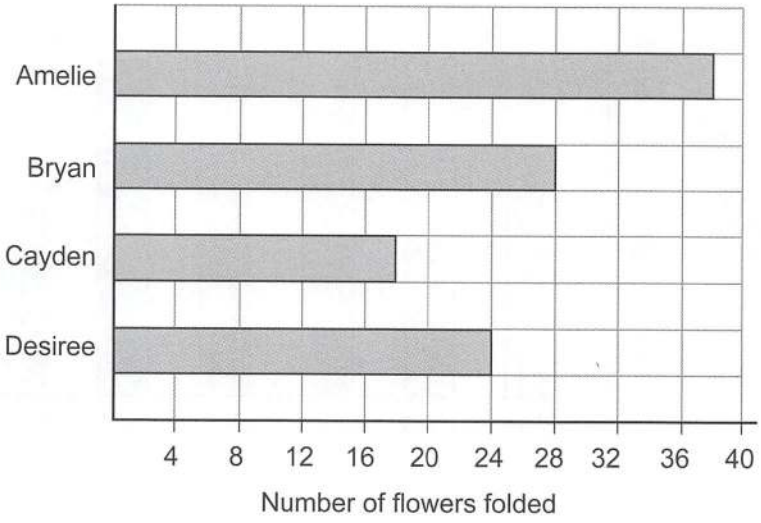
(e) Emily raised as much as _____ and _____ combined.

(f) The total amount of money raised was _____.

[6 marks]

6. Some students help to fold paper flowers to decorate their classroom. The bar graph below shows the number of paper flowers each of them folds.

Paper flowers folded by students



(a) Amelie folds _____ paper flowers.

(b) Bryan folds _____ paper flowers.

(c) Cayden folds _____ fewer paper flowers than Desiree.

(d) _____ folds the most number of paper flowers.

(e) _____ folds the least number of paper flowers.

(f) The students fold _____ paper flowers altogether.

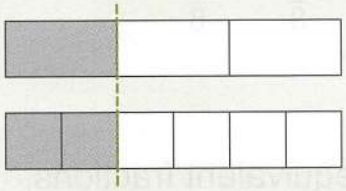
[6 marks]

12 Fractions

Recognise and understand equivalent fractions

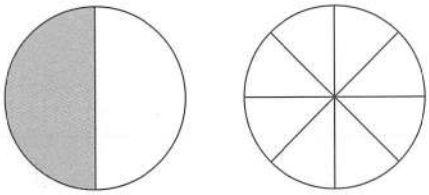
(A) Shade the correct parts to show the equivalent fraction. Write the equivalent fraction in the boxes provided. [5 marks]

Example:

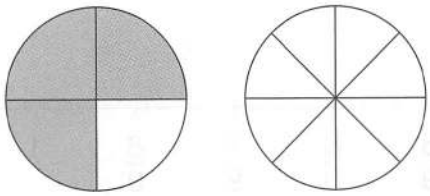


There are 6 equal parts altogether.
We need to shade 2 parts.

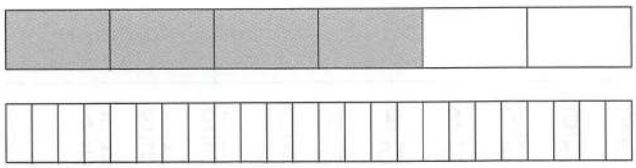
$\frac{1}{3} = \frac{2}{6}$

1. 

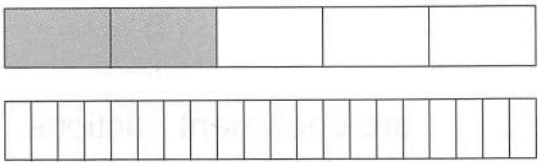
$\frac{1}{2} = \frac{\square}{\square}$

2. 

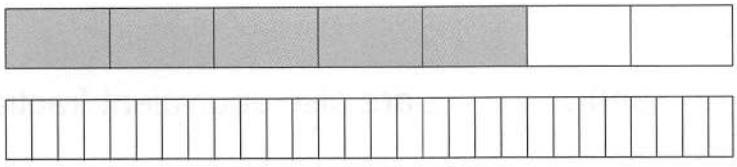
$\frac{3}{4} = \frac{\square}{\square}$

3. 

$\frac{4}{6} = \frac{\square}{\square}$

4. 

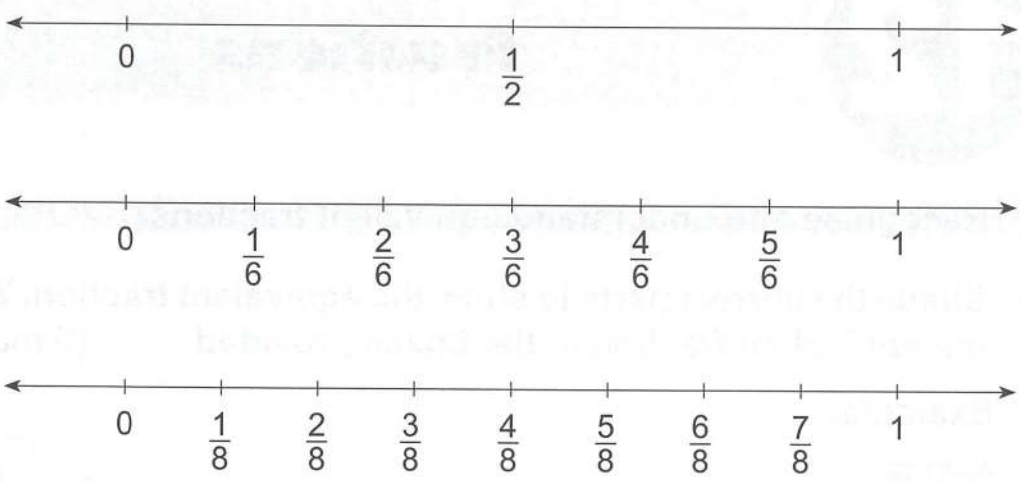
$\frac{2}{5} = \frac{\square}{\square}$

5. 

$\frac{5}{7} = \frac{\square}{\square}$

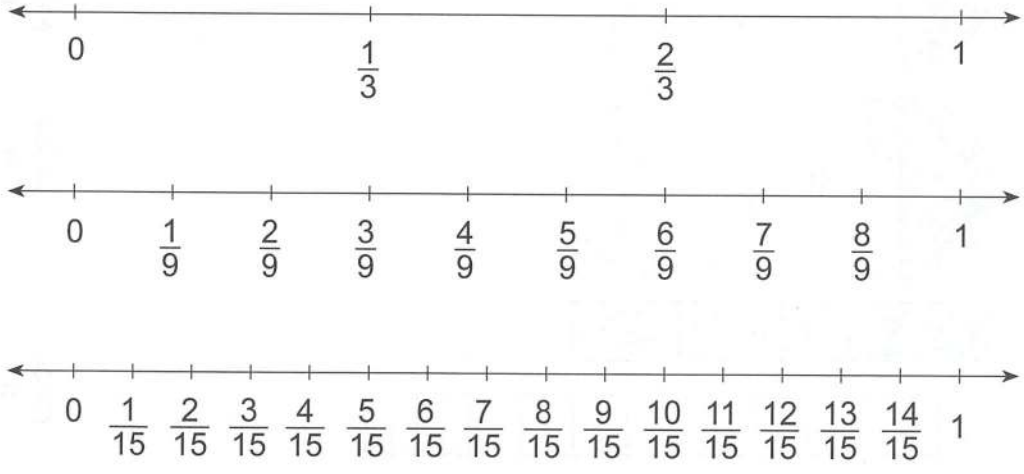
(B) Fill in each blank with the correct answer. [9 marks]

1.



_____, _____ and _____ are equivalent fractions.

2.

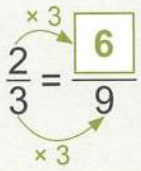


_____, _____ and _____ are equivalent fractions.

_____, _____ and _____ are also equivalent fractions.

(C) Fill in each box with the correct answer to make the fraction equivalent. [10 marks]

Example:



1. $\frac{4}{8} = \frac{20}{\square}$
2. $\frac{3}{7} = \frac{\square}{28}$
3. $\frac{1}{10} = \frac{8}{\square}$
4. $\frac{5}{9} = \frac{35}{\square}$
5. $\frac{3}{4} = \frac{12}{\square}$
6. $\frac{7}{12} = \frac{\square}{36}$
7. $\frac{2}{6} = \frac{\square}{36}$
8. $\frac{6}{11} = \frac{42}{\square}$
9. $\frac{3}{5} = \frac{\square}{30}$
10. $\frac{8}{12} = \frac{\square}{48}$

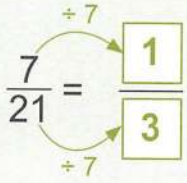
(D) List down all the equivalent fractions. [20 marks]

1. $\frac{1}{5} = \frac{\square}{10} = \frac{3}{\square} = \frac{4}{\square} = \frac{5}{\square}$
2. $\frac{3}{8} = \frac{\square}{16} = \frac{\square}{24} = \frac{12}{\square} = \frac{15}{\square}$
3. $\frac{2}{5} = \frac{4}{\square} = \frac{\square}{15} = \frac{8}{\square} = \frac{10}{\square}$
4. $\frac{1}{4} = \frac{2}{\square} = \frac{\square}{12} = \frac{4}{\square} = \frac{5}{\square}$
5. $\frac{1}{7} = \frac{\square}{14} = \frac{\square}{21} = \frac{4}{\square} = \frac{5}{\square}$

Express a fraction in its simplest form

Express each fraction in its simplest form. **[20 marks]**

Example:



1. $\frac{3}{9} = \frac{\square}{\square}$

2. $\frac{8}{16} = \frac{\square}{\square}$

3. $\frac{36}{45} = \frac{\square}{\square}$

4. $\frac{35}{42} = \frac{\square}{\square}$

5. $\frac{9}{63} = \frac{\square}{\square}$

6. $\frac{22}{33} = \frac{\square}{\square}$

7. $\frac{64}{72} = \frac{\square}{\square}$

8. $\frac{12}{18} = \frac{\square}{\square}$

9. $\frac{9}{24} = \frac{\square}{\square}$

10. $\frac{12}{36} = \frac{\square}{\square}$

11. $\frac{7}{28} = \frac{\square}{\square}$

12. $\frac{8}{20} = \frac{\square}{\square}$

13. $\frac{25}{35} = \frac{\square}{\square}$

14. $\frac{60}{96} = \frac{\square}{\square}$

15. $\frac{63}{81} = \frac{\square}{\square}$

16. $\frac{28}{44} = \frac{\square}{\square}$

17. $\frac{24}{32} = \frac{\square}{\square}$

18. $\frac{18}{30} = \frac{\square}{\square}$

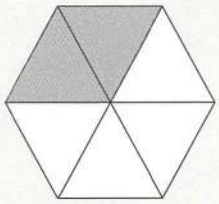
19. $\frac{15}{27} = \frac{\square}{\square}$

20. $\frac{24}{108} = \frac{\square}{\square}$

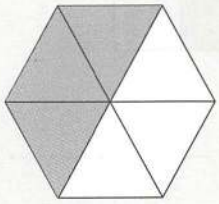
Compare and arrange fractions

(A) Fill in each blank with the correct fraction. **[6 marks]**

Example:



$\frac{2}{6}$



$\frac{3}{6}$

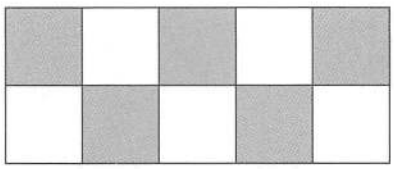
Since the denominators are the same, we compare the numerators:

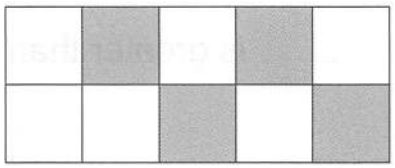
3 is greater than 2.

So, $\frac{3}{6}$ is greater than $\frac{2}{6}$.

$\frac{3}{6}$ is greater than **$\frac{2}{6}$**.

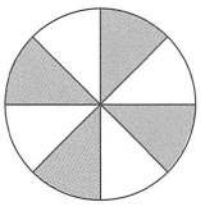
1.

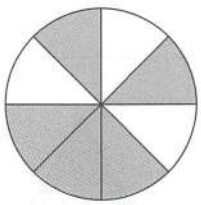




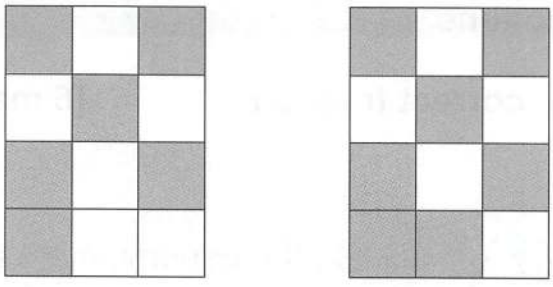
_____ is smaller than _____.

2.

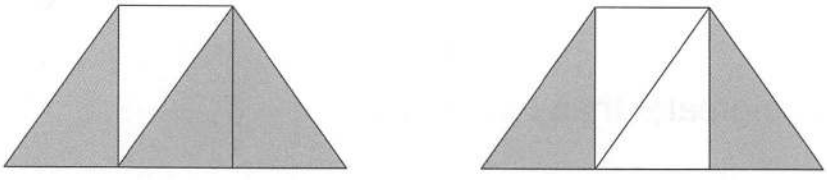




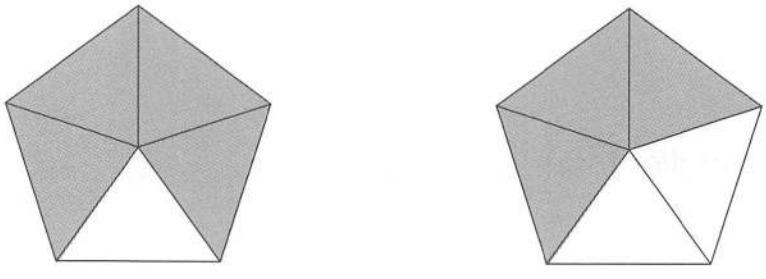
_____ is smaller than _____.

3. 

_____ is greater than _____.

4. 

_____ is greater than _____.

5. 

_____ is smaller than _____.

6. 

_____ is greater than _____.

(B) Compare these fractions. Circle the greater fraction.

[5 marks]

1. $\frac{2}{3}$ and $\frac{6}{12}$

2. $\frac{3}{8}$ and $\frac{2}{5}$

3. $\frac{4}{6}$ and $\frac{2}{8}$

4. $\frac{2}{7}$ and $\frac{1}{9}$

5. $\frac{3}{11}$ and $\frac{1}{4}$

(C) Compare these fractions. Circle the smaller fraction.

[5 marks]

1. $\frac{1}{6}$ and $\frac{5}{6}$

2. $\frac{4}{9}$ and $\frac{2}{9}$

3. $\frac{3}{6}$ and $\frac{3}{9}$

4. $\frac{5}{8}$ and $\frac{5}{11}$

5. $\frac{7}{12}$ and $\frac{7}{9}$

(D) Arrange the fractions in order. Begin with the greatest.

[5 marks]

1. $\frac{3}{9}$, $\frac{8}{9}$, $\frac{5}{9}$ _____

2. $\frac{4}{6}$, $\frac{2}{8}$, $\frac{3}{4}$ _____

3. $\frac{7}{12}$, $\frac{3}{4}$, $\frac{1}{6}$ _____

4. $\frac{2}{5}$, $\frac{8}{9}$, $\frac{4}{15}$ _____

5. $\frac{6}{7}$, $\frac{6}{12}$, $\frac{6}{9}$ _____

(E) Arrange the fractions in order. Begin with the smallest.
[5 marks]

1. $\frac{2}{3}$, $\frac{2}{5}$, $\frac{2}{4}$ _____

2. $\frac{3}{8}$, $\frac{4}{6}$, $\frac{1}{4}$ _____

3. $\frac{6}{10}$, $\frac{3}{6}$, $\frac{1}{5}$ _____

4. $\frac{12}{20}$, $\frac{18}{20}$, $\frac{11}{20}$ _____

5. $\frac{4}{7}$, $\frac{5}{6}$, $\frac{2}{3}$ _____

Add and subtract fractions

(A) Add these fractions. **[10 marks]**

Example:

$$\frac{2}{3} + \frac{1}{9} = \frac{2 \times 3}{3 \times 3} + \frac{1}{9} = \frac{6}{9} + \frac{1}{9}$$
$$= \frac{7}{9}$$

1. $\frac{1}{4} + \frac{1}{2} =$
2. $\frac{5}{12} + \frac{1}{6} =$
3. $\frac{2}{5} + \frac{3}{10} =$
4. $\frac{3}{8} + \frac{1}{4} =$
5. $\frac{1}{3} + \frac{7}{12} =$
6. $\frac{8}{15} + \frac{2}{5} =$
7. $\frac{1}{5} + \frac{7}{25} =$
8. $\frac{1}{12} + \frac{1}{2} =$
9. $\frac{2}{9} + \frac{1}{3} =$
10. $\frac{5}{16} + \frac{1}{4} =$

(B) Subtract these fractions. **[10 marks]**

Example:

$$\frac{1}{2} - \frac{1}{5} = \frac{1 \times 5}{2 \times 5} - \frac{1 \times 2}{5 \times 2} = \frac{5}{10} - \frac{2}{10}$$
$$= \frac{3}{10}$$

1. $\frac{4}{5} - \frac{7}{10} =$
2. $\frac{7}{8} - \frac{3}{4} =$
3. $\frac{5}{6} - \frac{5}{12} =$
4. $\frac{4}{9} - \frac{1}{3} =$

5. $\frac{5}{8} - \frac{1}{2} =$

6. $\frac{14}{15} - \frac{2}{3} =$

7. $\frac{13}{18} - \frac{1}{3} =$

8. $\frac{2}{3} - \frac{1}{2} =$

9. $\frac{3}{4} - \frac{2}{3} =$

10. $\frac{5}{6} - \frac{3}{5} =$

(C) Do these sums. Write the correct answers on the lines provided. **[8 marks]**

1. Find the sum of $\frac{1}{9}$, $\frac{1}{3}$ and $\frac{4}{9}$. _____

2. Find the sum of $\frac{1}{4}$, $\frac{3}{8}$ and $\frac{1}{8}$. _____

3. Find $1 - \frac{7}{12} - \frac{1}{6}$. _____

4. Find $1 - \frac{1}{3} - \frac{5}{9}$. _____

5. What is $\frac{3}{10} + \frac{1}{2} + \frac{1}{10}$? _____

6. What is $\frac{2}{6} + \frac{1}{3} + \frac{1}{6}$? _____

7. What is $1 - \frac{3}{8} - \frac{1}{2}$? _____

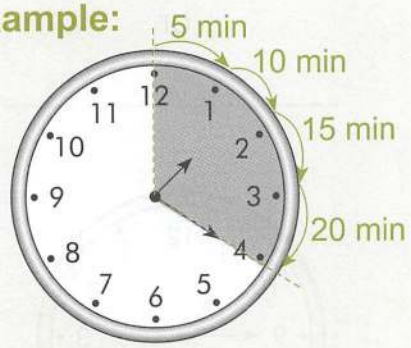
8. What is $1 - \frac{3}{5} - \frac{1}{10}$? _____

13 Time

Read and write the correct time

(A) Fill in each blank with the correct time. **[10 marks]**

Example:

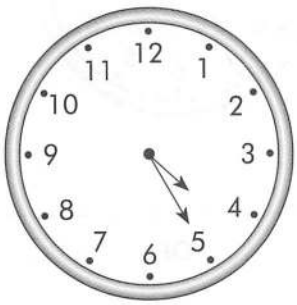


1.20

or

20 minutes past 1

1.



or

3.

or

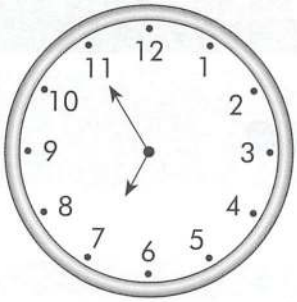
2.

or

4.

or

5.



_____

or

_____

6.

_____

or

_____

7.

_____

or

_____

8.

_____

or

_____

9.

_____

or

_____

10.

_____

or

_____

(B) Fill in each blank with the correct answer. [12 marks]

1. _____ is 11 minutes past 1.

2. _____ is 29 minutes past 6.

3. 12.25 is _____ minutes past 12.

4. 8.19 is _____ minutes past 8.

5. 4.10 is 10 minutes past _____.

6. 7.06 is 6 minutes past _____.

7. _____ is 9 minutes to 12.

8. _____ is 16 minutes to 3.

9. 3.55 is _____ minutes to 4.

10. 10.38 is _____ minutes to 11.

11. 5.48 is 12 minutes to _____.

12. 9.50 is 10 minutes to _____.

Express time in minutes or hours and minutes

(A) Express the following in minutes. **[10 marks]**

Example:

3 h = 180 min

1 h = 60 min
3 × 60 = 180
So, 3 × 60 min = 180 min.

1. 1 h 20 min = _____ min
2. 4 h 5 min = _____ min
3. 8 h 15 min = _____ min
4. 6 h 30 min = _____ min
5. 2 h 55 min = _____ min
6. 7 h 25 min = _____ min
7. 10 h 10 min = _____ min
8. 5 h 50 min = _____ min
9. 3 h 25 min = _____ min
10. 9 h 45 min = _____ min

(B) Express the following in hours. **[5 marks]**

Example:

120 min = 2 h

60 min = 1 h
120 ÷ 60 = 2
So, 120 min ÷ 60 min = 2 h.

1. 420 min = _____ h
2. 300 min = _____ h
3. 600 min = _____ h
4. 240 min = _____ h
5. 540 min = _____ h

(C) Express the following in hours and minutes. [10 marks]

Example:

75 min = 1 h 15 min

75 min = 60 min + 15 min
= 1 h 15 min

1. 515 min = ____ h ____ min

2. 455 min = ____ h ____ min

3. 190 min = ____ h ____ min

4. 430 min = ____ h ____ min

5. 150 min = ____ h ____ min

6. 305 min = ____ h ____ min

7. 560 min = ____ h ____ min

8. 280 min = ____ h ____ min

9. 385 min = ____ h ____ min

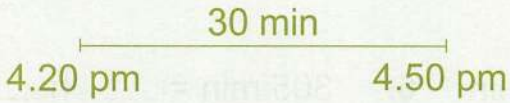
10. 655 min = ____ h ____ min

Find duration between two different times

Draw timelines to find the duration. **[10 marks]**

Example:

4.20 pm to 4.50 pm = 30 minutes



1. 2.30 pm to 4.45 pm = _____ h _____ min
2. 10.25 am to 1.40 pm = _____ h _____ min
3. 11.40 am to 3.35 pm = _____ h _____ min
4. 7.10 pm to 10.55 pm = _____ h _____ min
5. 11.30 am to 7.30 pm = _____ h _____ min
6. 1.15 pm to 5.57 pm = _____ h _____ min
7. 3.31 pm to 5.25 pm = _____ h _____ min
8. 12.52 am to 6.18 am = _____ h _____ min
9. 4.46 pm to 11.39 pm = _____ h _____ min
10. 9.44 am to 6.22 pm = _____ h _____ min

Find the starting time or ending time

(A) Fill in each blank with the correct answer. **[10 marks]**

1. 3 hours after 5.00 pm is _____.

2. 5 hours after 7.00 pm is _____.

3. 30 minutes after 11.30 am is _____.

4. 49 minutes after 8.00 am is _____.

5. 4 hours after 2.25 pm is _____.

6. 2 hours after 6.02 am is _____.

7. 6 hours after 12.56 pm is _____.

8. 25 minutes after 9.35 am is _____.

9. 11 minutes after 10.51 pm is _____.

10. 40 minutes after 1.08 am is _____.

(B) Fill in each blank with the correct answer. [10 marks]

1. 7 hours before 1.00 pm is _____.

2. 4 hours before 9.00 am is _____.

3. 50 minutes before 12.30 pm is _____.

4. 8 minutes before 7.00 am is _____.

5. 5 hours before 11.15 am is _____.

6. 6 hours before 10.46 pm is _____.

7. 3 hours before 2.08 pm is _____.

8. 20 minutes before 8.55 am is _____.

9. 45 minutes before 3.44 pm is _____.

10. 57 minutes before 6.12 am is _____.

Solve word problems related to time

Do these word problems. Show your working clearly in the space provided.

1. Susie and her friends watched a play. The play started at 5.30 pm and it lasted 1 h 20 min. What time did the play end?

[1 mark]

2. John reached his friend's house at 10.15 am. He stayed there until 2.55 pm. How long did he stay at his friend's house?

[1 mark]

3. Melissa is meeting her friends for dinner at 7 pm. The journey to the restaurant takes 55 minutes. At what time must she leave her house if she wants to reach the restaurant on time? **[1 mark]**

4. Mr Matthew is a part-time lecturer. He is paid $125 an hour. The table below shows the number of hours he teaches in a week. How much does Mr Matthew earn in a week? **[1 mark]**

Day	Number of hours
Monday	3 h
Tuesday	2 h
Wednesday	3 h
Thursday	4 h
Friday	2 h
Saturday	5 h

5. Aunt Grace works at a factory. She is paid $9 per hour. She works 8 hours every day.

   (a) If she works from Monday to Saturday, find the total number of hours she works in a week. **[1 mark]**

   (b) How much does she earn in a week? **[1 mark]**

6. Dave is a part-time proofreader. He needs 2 hours to proofread a book. He is paid $15 an hour.

   (a) How many hours does he need to proofread a series of six books? **[1 mark]**

   (b) Find the total amount of money he will be paid for proofreading the six books. **[1 mark]**

7. Francis painted 4 drawings. He took 2 hours to paint each drawing.

(a) How long did he take to paint the 4 drawings? **[1 mark]**

(b) If he started painting at 10.00 am, what time did he finish? **[1 mark]**

8. Shanice took a coach from Singapore to Kuala Lumpur. The journey was 5 hours.

(a) If she departed at 8.00 am, what time did she arrive in Kuala Lumpur? **[1 mark]**

(b) If she returned to Singapore on a flight that took 4 h 5 min less than the coach, how long was the flight? **[1 mark]**

9. Kylie finished her movie at 6.25 pm according to her watch.

(a) If her watch was 10 minutes fast, what was the actual time she finished her movie? **[1 mark]**

(b) If the movie was 1 h 40 min long, what time did it start? **[1 mark]**

10. Tony and Thadeus took turns to work on a sculpture. Tony started working on it first at 9.45 am and took 2 h 40 min. Thadeus took over and worked on it for another 3 h 15 min.

(a) How long did both of them work on the sculpture? **[1 mark]**

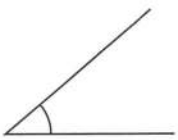
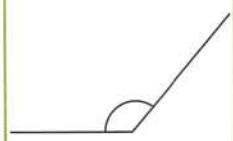
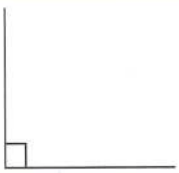
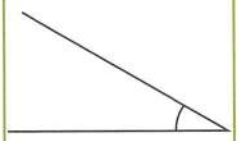
(b) What time did they finish working on the sculpture? **[1 mark]**

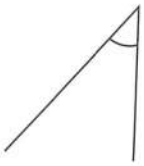
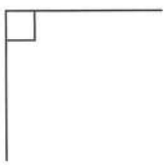
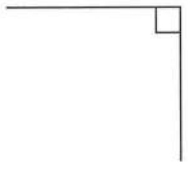
Do Review 6 to practise on Bar Graphs, Fractions and Time.
Go to **My SAPeducation App** or www.sapgrp.com

14 Angles

Identify angles and right angles

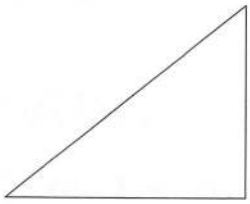
(A) Identify the angles. Put a tick (✓) in the correct box. [12 marks]

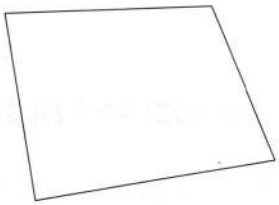
		Acute	Right	Obtuse
1.				
2.				
3.				
4.				
5.				
6.				

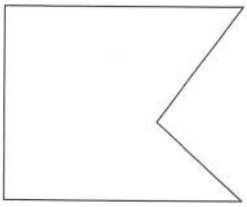
		Acute	Right	Obtuse
7.				
8.				
9.				
10.				
11.				
12.				

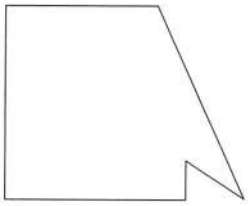
(B) Identify right angles. [6 marks]

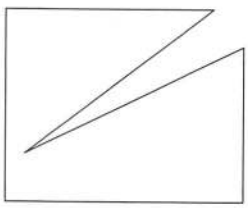
1. Mark all the right angles in each figure.

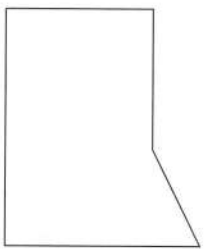
(a) 

(d) 

(b) 

(e) 

(c) 

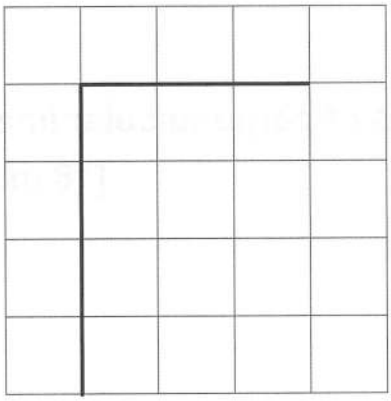
(f) 

15 Perpendicular and Parallel Lines

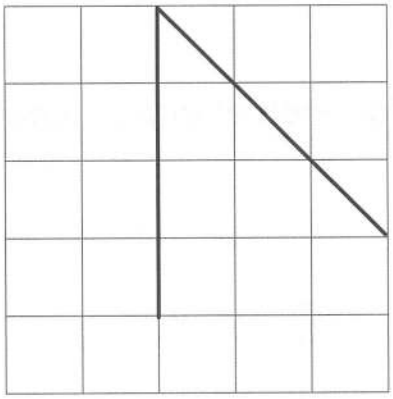
Identify and draw perpendicular lines

(A) Put a tick (✓) in the box if the pair of lines is perpendicular.
Put a cross (×) if the pair of lines is not perpendicular.
Mark (⊥) on each pair of perpendicular lines. [6 marks]

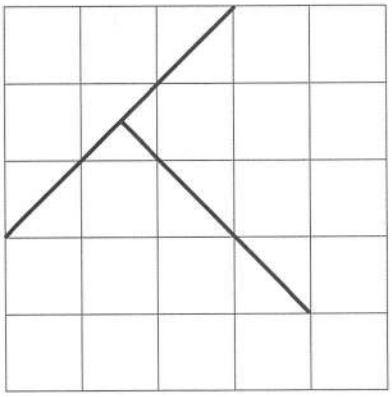
1.



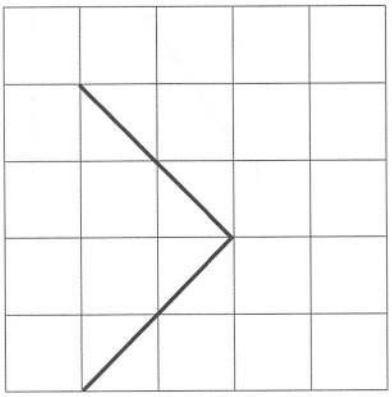
3.



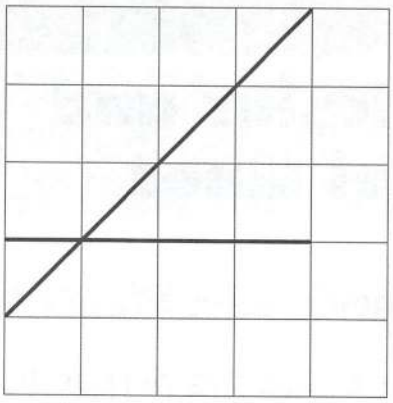
2.



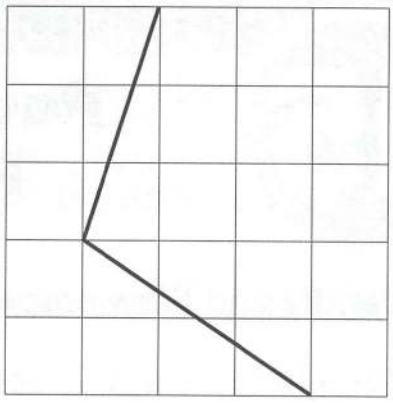
4.



5.



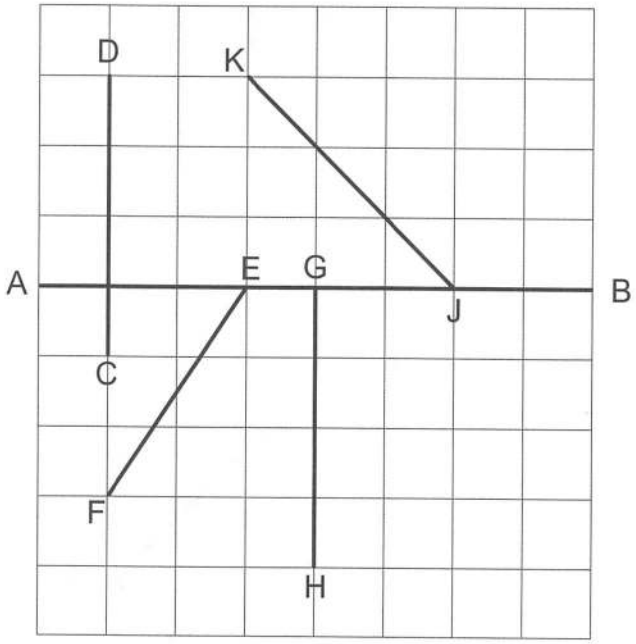
6.



(B) For each diagram, identify all pairs of perpendicular lines.

[18 marks]

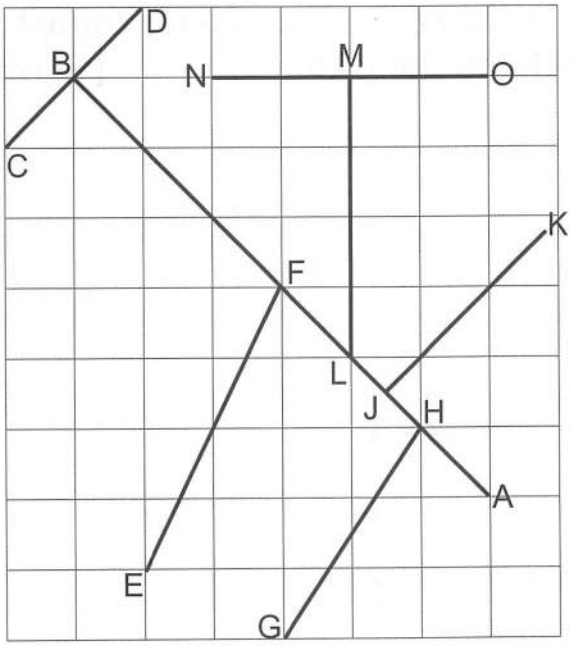
1.



_____ ⊥ _____

_____ ⊥ _____

2.

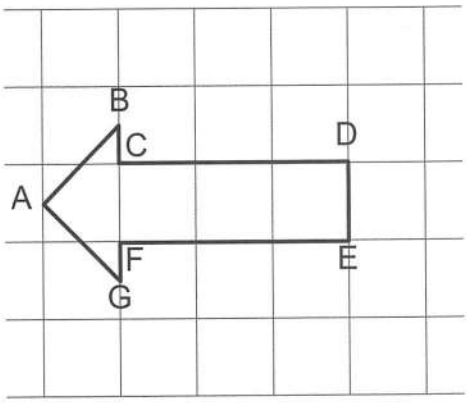


_____ ⊥ _____

_____ ⊥ _____

_____ ⊥ _____

3.



_____ ⊥ _____

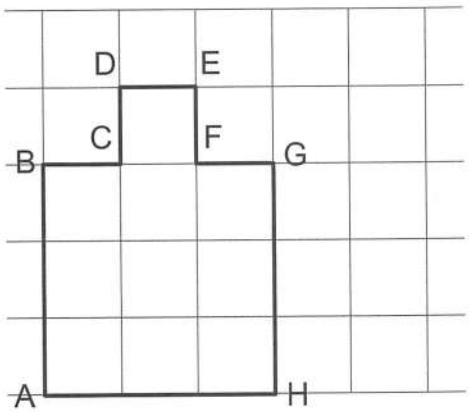
_____ ⊥ _____

_____ ⊥ _____

_____ ⊥ _____

_____ ⊥ _____

4.



_____ ⊥ _____

_____ ⊥ _____

_____ ⊥ _____

_____ ⊥ _____

_____ ⊥ _____

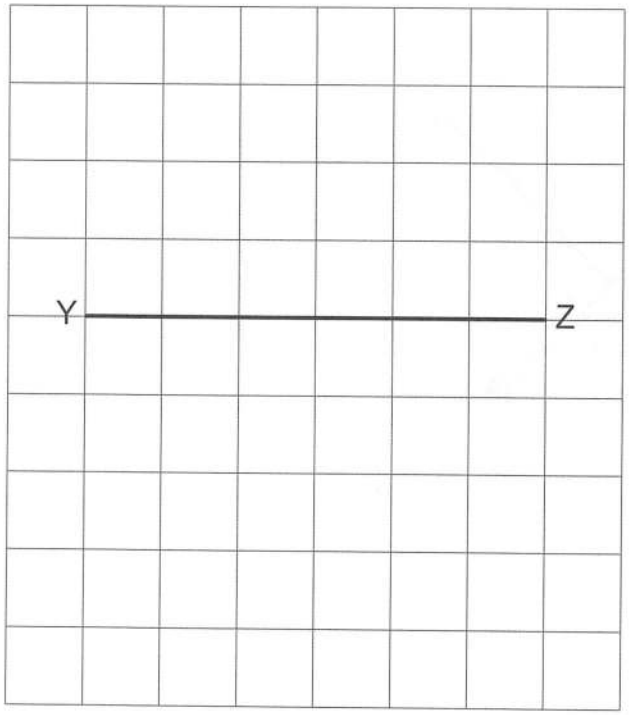
_____ ⊥ _____

_____ ⊥ _____

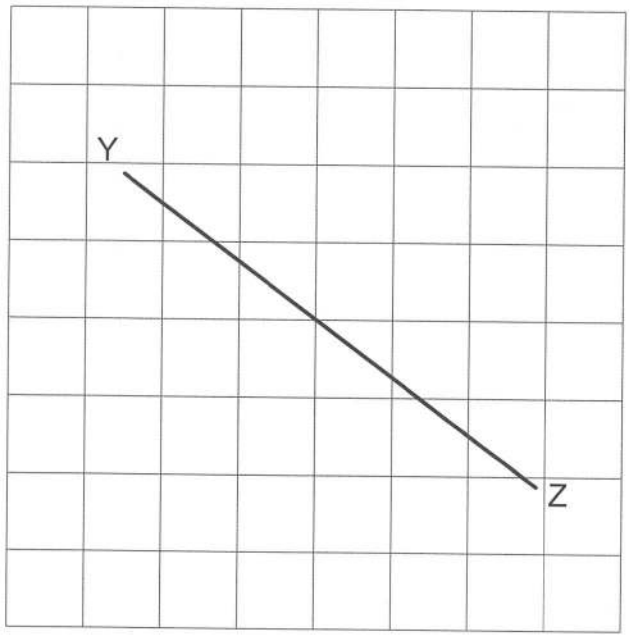
_____ ⊥ _____

(C) Draw 3 lines perpendicular to YZ. For each line, it must pass through at least two points on the grid. [12 marks]

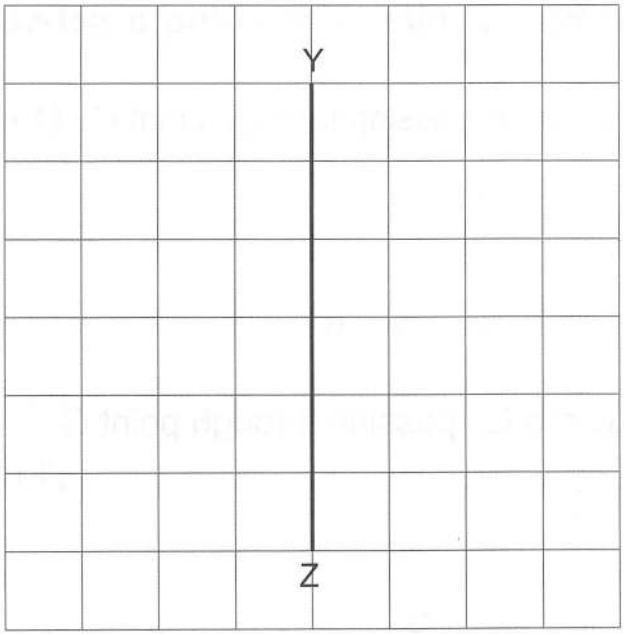
1.



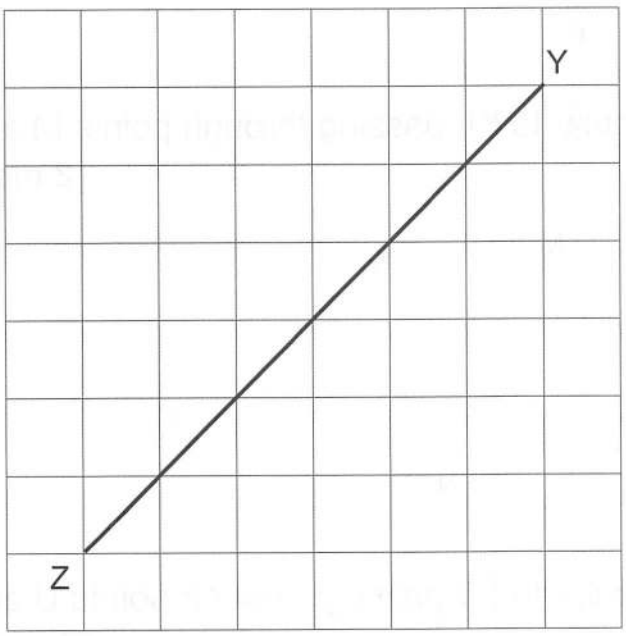
2.



3.

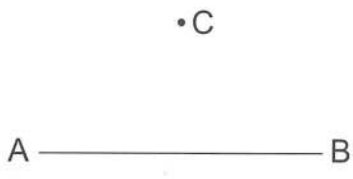


4.

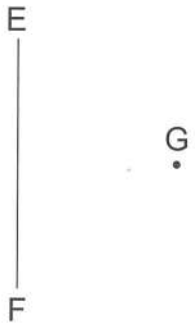


(D) Draw the following perpendicular lines using a set-square and a ruler.

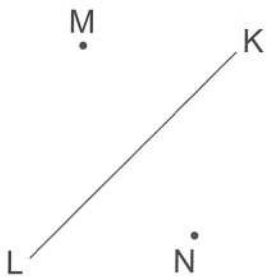
1. Draw a line perpendicular to AB passing through point C. **[1 mark]**



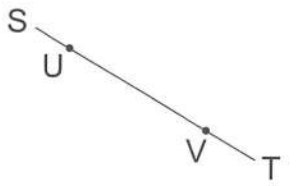
2. Draw a line perpendicular to EF passing through point G. **[1 mark]**



3. Draw 2 lines perpendicular to KL passing through points M and N respectively. **[2 marks]**



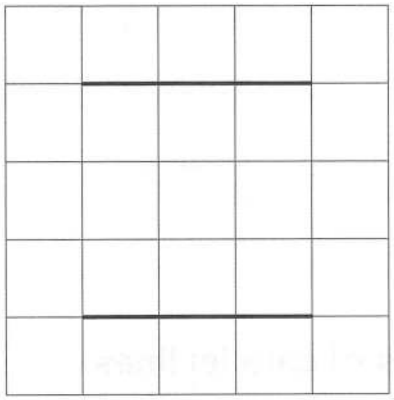
4. Draw 2 lines perpendicular to ST passing through points U and V respectively. **[2 marks]**



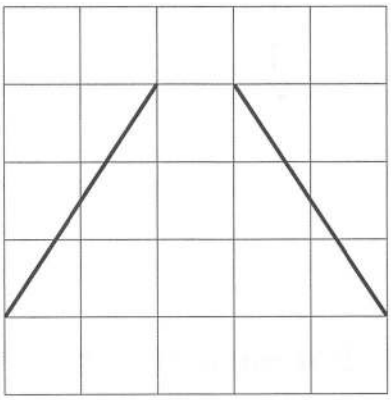
Identify and draw parallel lines

(A) Put a tick (✓) in the box if the pair of lines is parallel.
Put a cross (×) if the pair of lines is not parallel.
Mark (↑ ↑) on each pair of parallel lines. **[6 marks]**

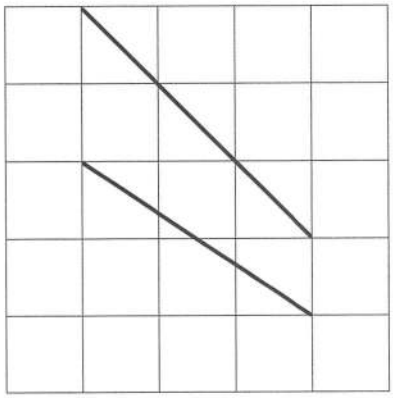
1.



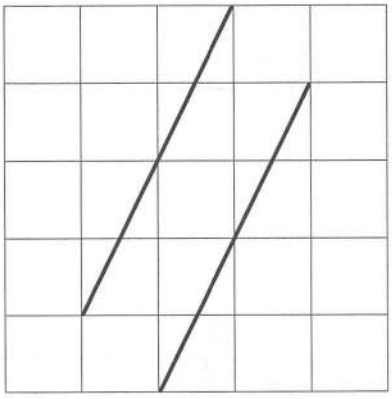
3.



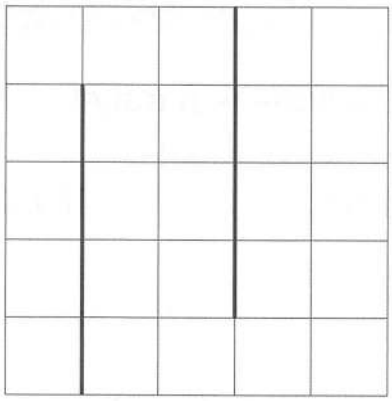
2.



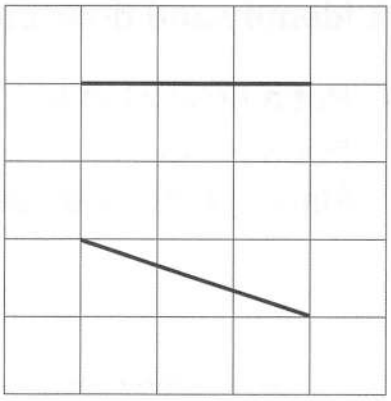
4.



5.



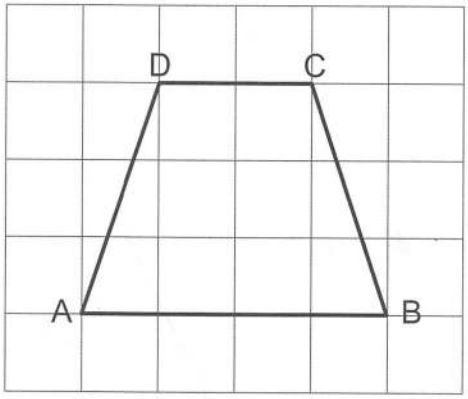
6.



(B) For each diagram, identify all pairs of parallel lines.

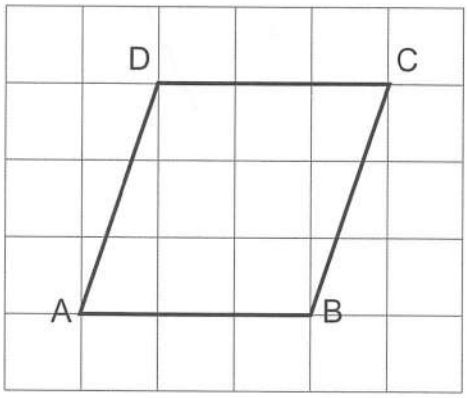
[11 marks]

1.



_____ // _____

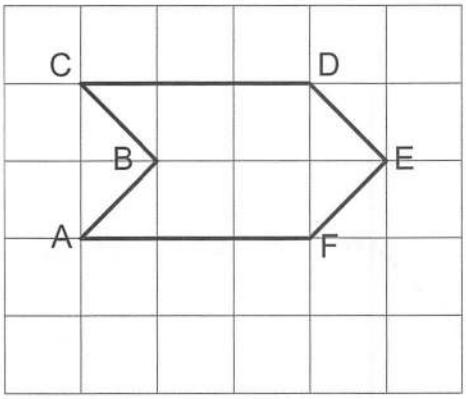
2.



_____ // _____

_____ // _____

3.

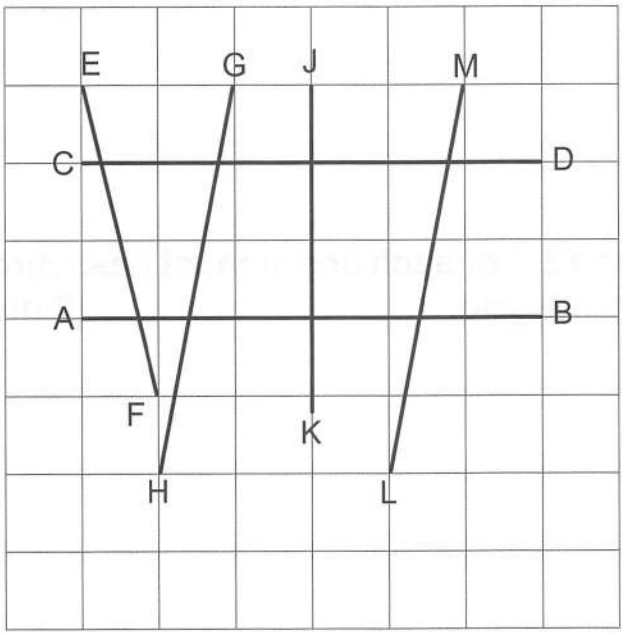


_____ // _____

_____ // _____

_____ // _____

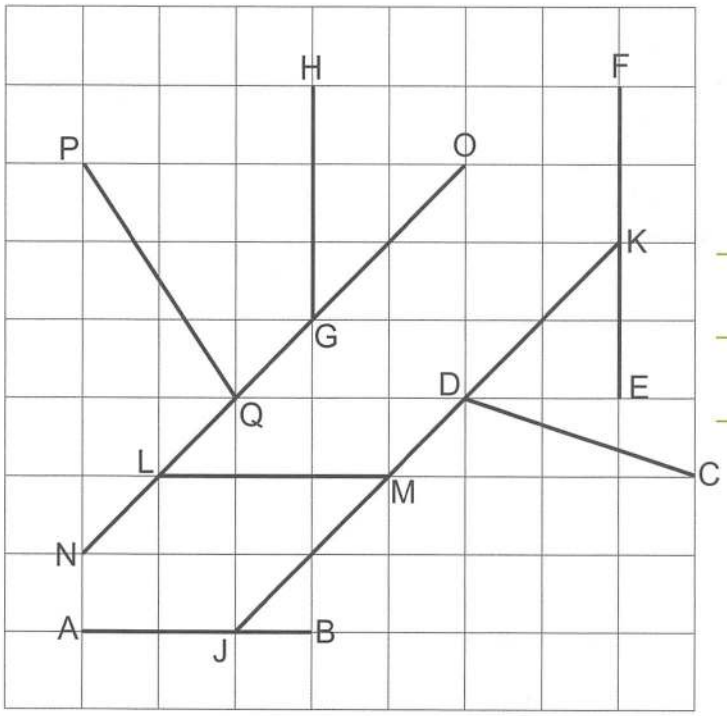
4.



_____ // _____

_____ // _____

5.



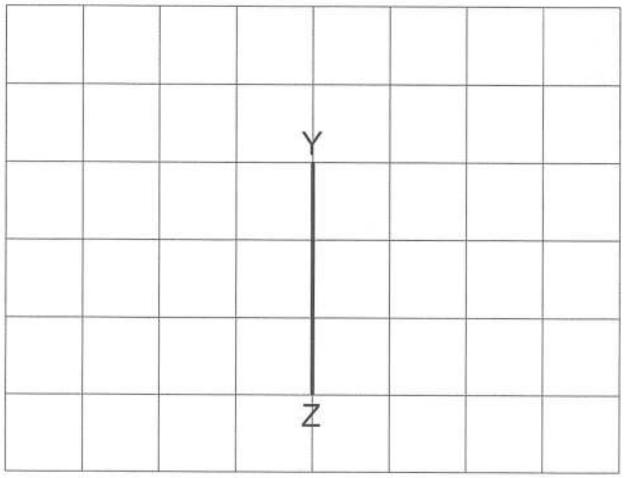
_____ // _____

_____ // _____

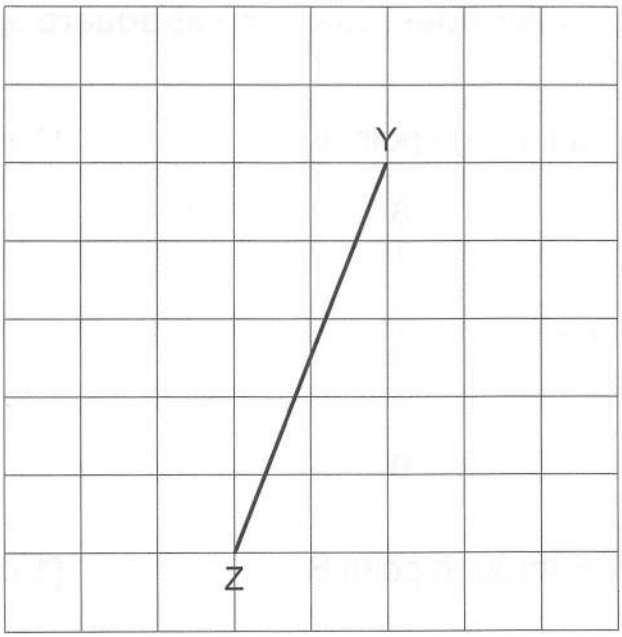
_____ // _____

(C) Draw 2 lines parallel to YZ. For each line, it must pass through at least two points on the grid. [8 marks]

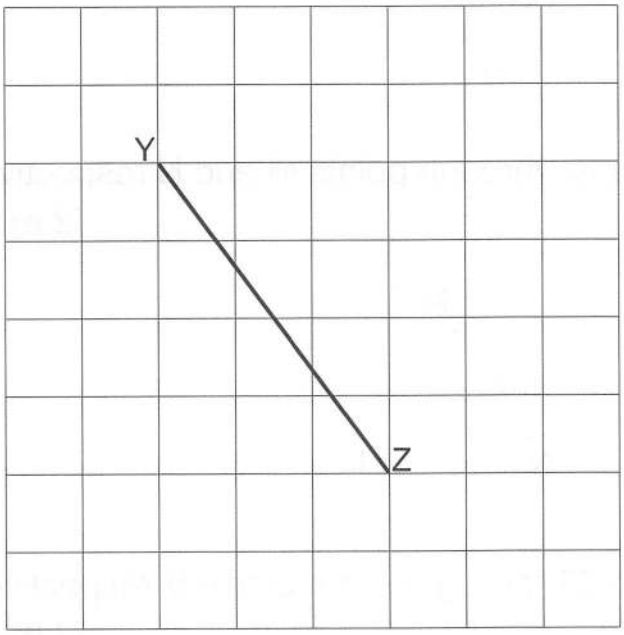
1.



2.

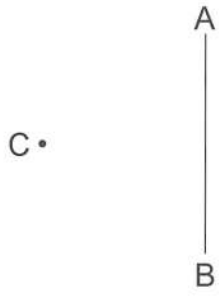


3.

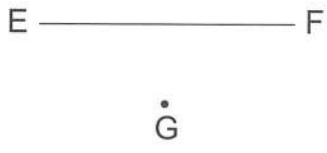


(D) Draw the following parallel lines using a set-square and a ruler.

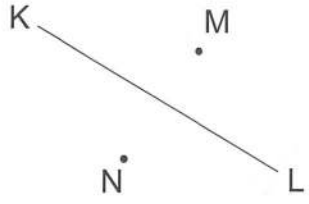
1. Draw a line parallel to AB through point C. **[1 mark]**



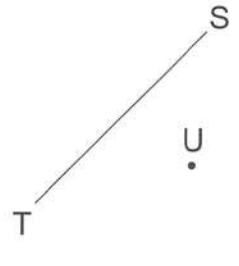
2. Draw a line parallel to EF through point B. **[1 mark]**



3. Draw 2 lines parallel to KL through points M and N respectively. **[2 marks]**



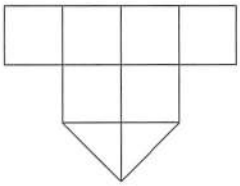
4. Draw 2 lines parallel to ST through points U and V respectively. **[2 marks]**



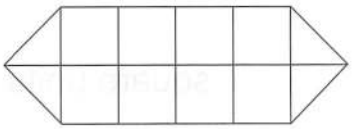
16 Area and Perimeter

Find the area and perimeter of figures in cm^2 and m^2

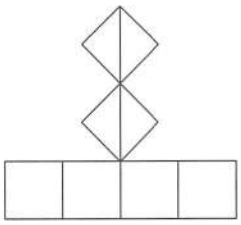
(A) Find the area of each figure. **[10 marks]**

1. 

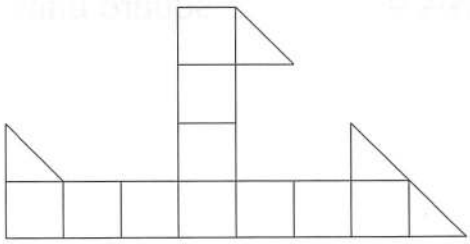
Area = _____ square units

2. 

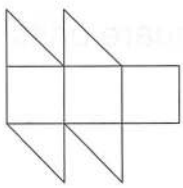
Area = _____ square units

3. 

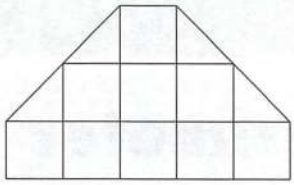
Area = _____ square units

4. 

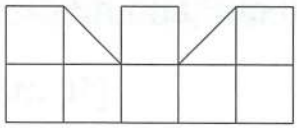
Area = _____ square units

5. 

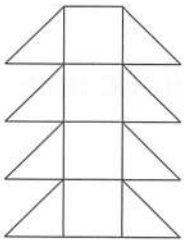
Area = _____ square units

6. 

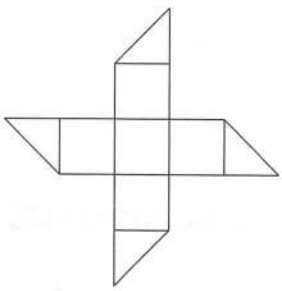
Area = _____ square units

7. 

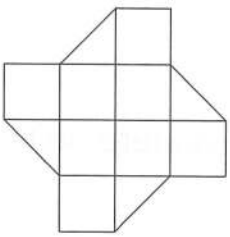
Area = _____ square units

8. 

Area = _____ square units

9. 

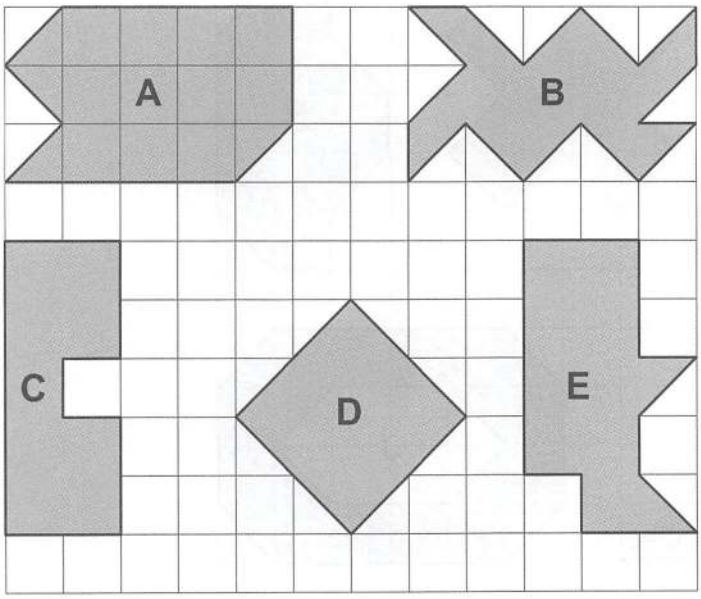
Area = _____ square units

10. 

Area = _____ square units

(B) Find the area of the shaded figures below.

1.



(a) The area of Figure A is _____ square units.

(b) The area of Figure B is _____ square units.

(c) The area of Figure C is _____ square units.

(d) The area of Figure D is _____ square units.

(e) The area of Figure E is _____ square units.

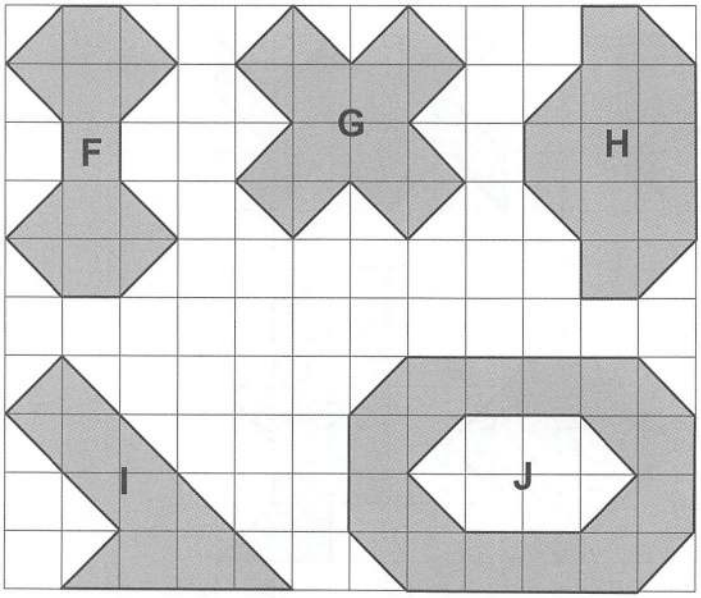
(f) Figures _____ and _____ have the same area.

(g) Figure _____ has the smallest area.

(h) Figure _____ has the greatest area.

[8 marks]

2.



(a) The area of Figure F is _____ square units.

(b) The area of Figure G is _____ square units.

(c) The area of Figure H is _____ square units.

(d) The area of Figure I is _____ square units.

(e) The area of Figure J is _____ square units.

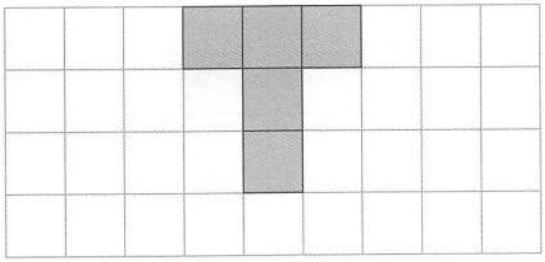
(f) Figure _____ has the smallest area.

(g) Figure _____ has the greatest area.

[7 marks]

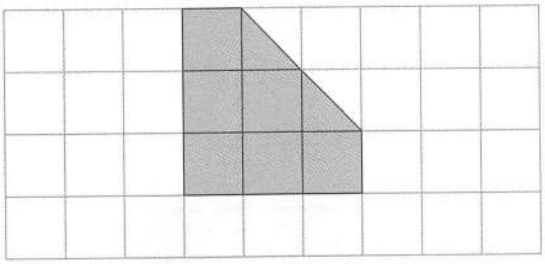
(C) Find the area of each figure. [5 marks]

1. Add 3 squares to the figure.



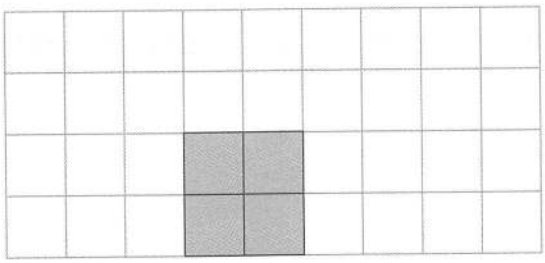
The area of the figure is _____ square units.

2. Add 4 squares to the figure.



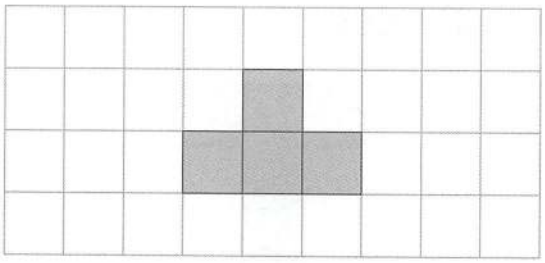
The area of the figure is _____ square units.

3. Add 2 squares and 2 half-squares to the figure.



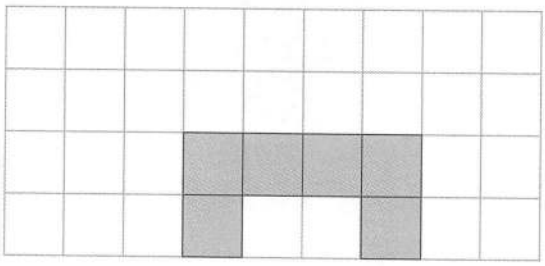
The area of the figure is _____ square units.

4. Add 3 squares and 4 half-squares to the figure.



The area of the figure is _____ square units.

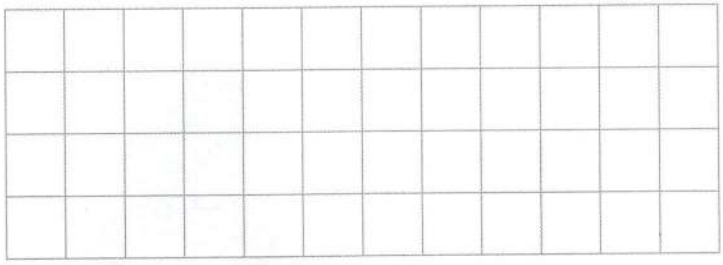
5. Add 4 squares and 4 half-squares to the figure.



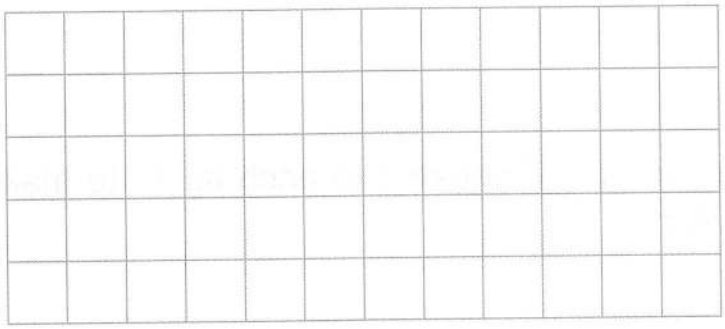
The area of the figure is _____ square units.

(D) Draw the following figures. [10 marks]

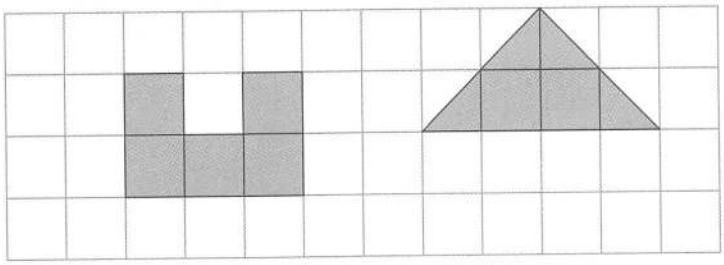
1. Draw 2 different figures with the same area of 7 square units.



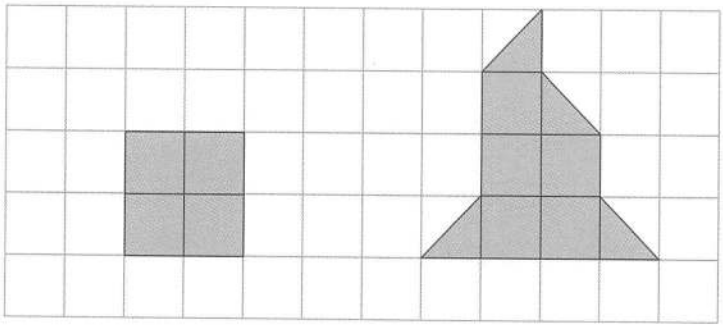
2. Draw 2 different figures with the same area of 10 square units.



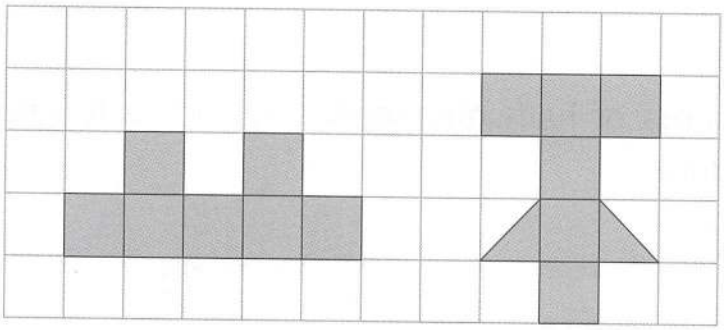
3. Add squares or half-squares to each figure to make its area 8 square units.



4. Add squares or half-squares to each figure to make its area 9 square units.

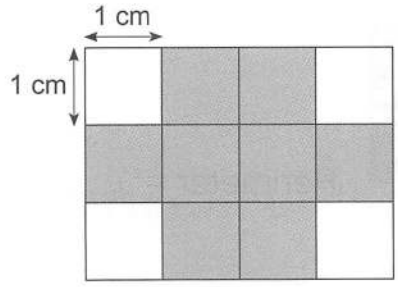


5. Add squares or half-squares to each figure to make its area 11 square units.



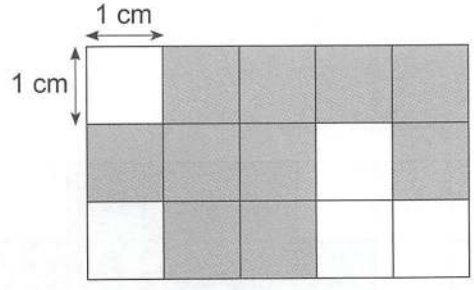
(E) Find the perimeter of each shaded figure. [5 marks]

1.



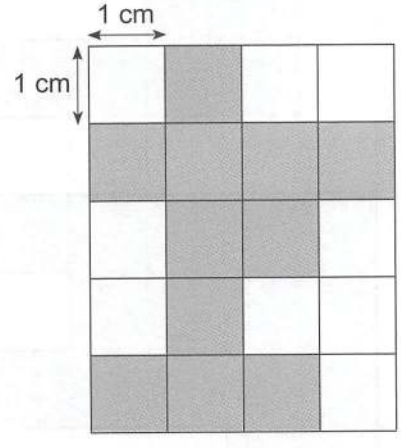
Perimeter = _____ cm

2.



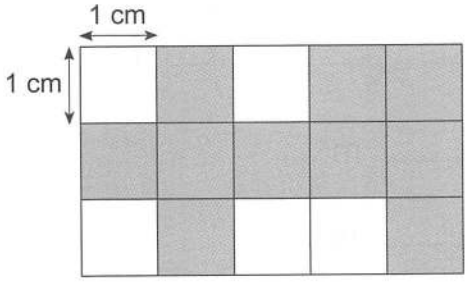
Perimeter = _____ cm

3.



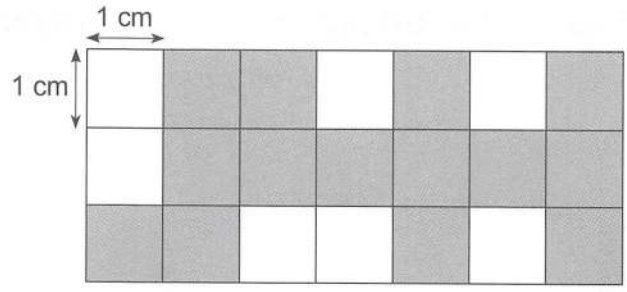
Perimeter = _____ cm

4.



Perimeter = _____ cm

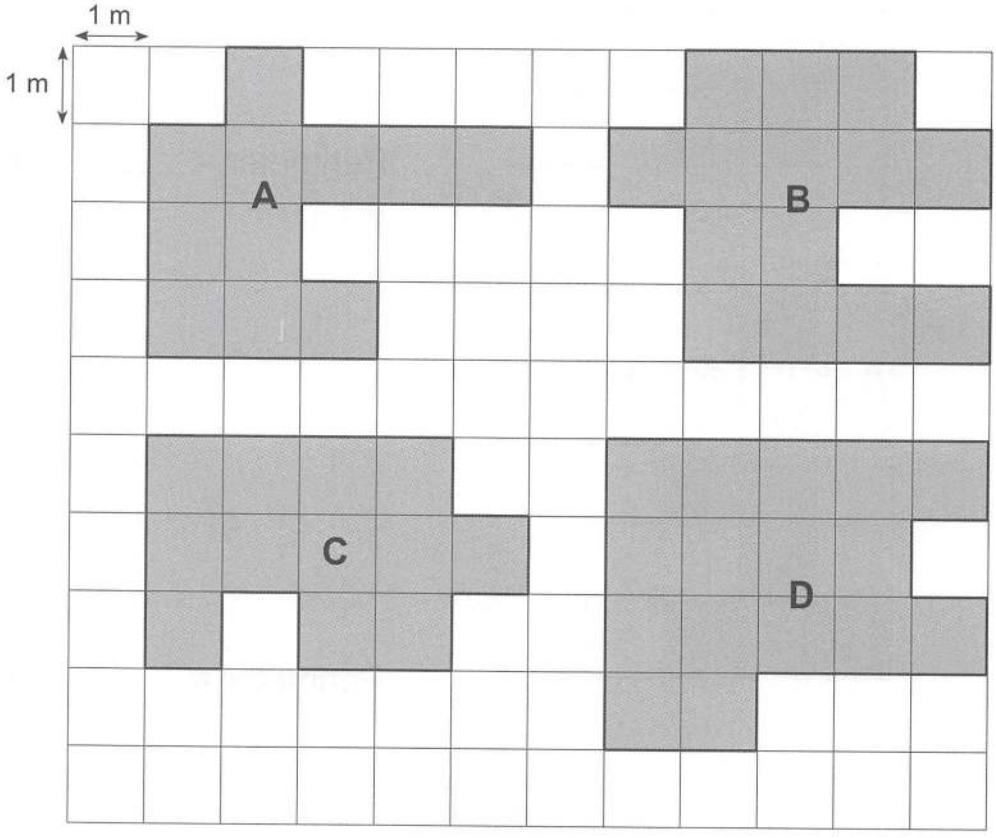
5.



Perimeter = _____ cm

(F) Study the following figures carefully. Fill in each blank with the correct answer.

1.



(a) The area of Figure A is _____ m^2.

(b) The area of Figure B is _____ m^2.

(c) The area of Figure C is _____ m^2.

(d) The area of Figure D is _____ m^2.

(e) The perimeter of Figure A is _____ m.

(f) The perimeter of Figure B is _____ m.

(g) The perimeter of Figure C is _____ m.

(h) The perimeter of Figure D is _____ m.

(i) Figure _____ has the smallest area.

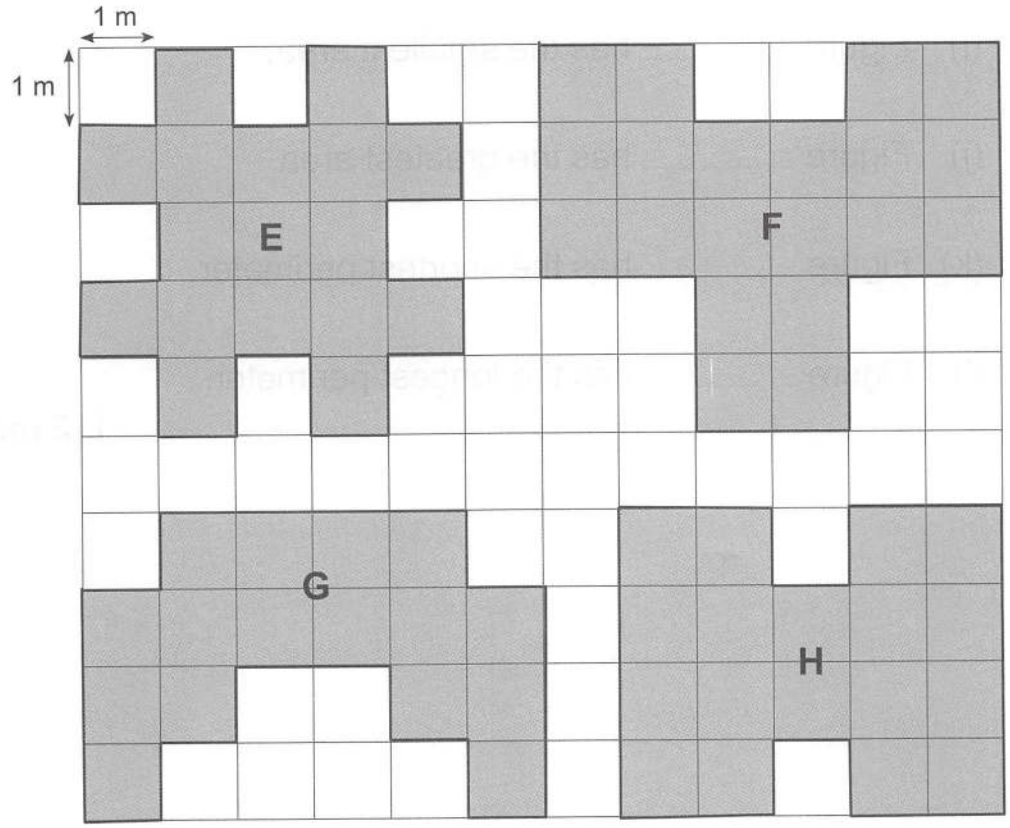
(j) Figure _____ has the greatest area.

(k) Figure _____ has the shortest perimeter.

(l) Figure _____ has the longest perimeter.

[12 marks]

2.



(a) The area of Figure E is _____ m^2.

(b) The area of Figure F is _____ m^2.

(c) The area of Figure G is _____ m^2.

(d) The area of Figure H is _____ m^2.

(e) The perimeter of Figure E is _____ m.

(f) The perimeter of Figure F is _____ m.

(g) The perimeter of Figure G is _____ m.

(h) The perimeter of Figure H is _____ m.

(i) Figure _____ has the smallest area.

(j) Figure _____ has the greatest area.

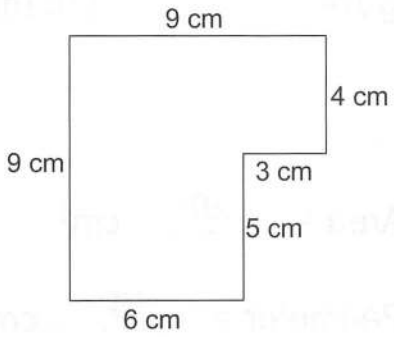
(k) Figure _____ has the shortest perimeter.

(l) Figure _____ has the longest perimeter.

[12 marks]

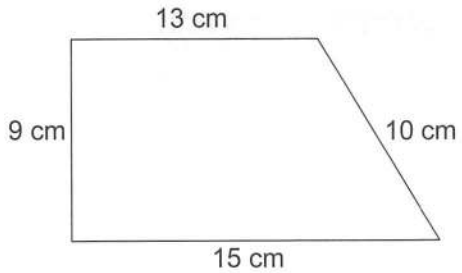
(G) Find the perimeter of each figure. [5 marks]

1.



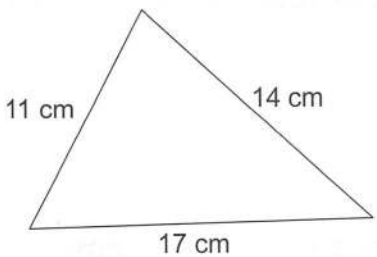
Perimeter = _____ cm

2.



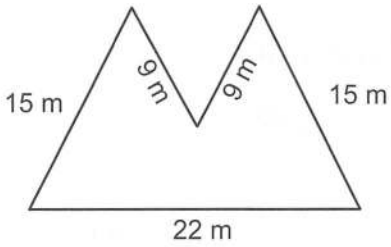
Perimeter = _____ cm

3.



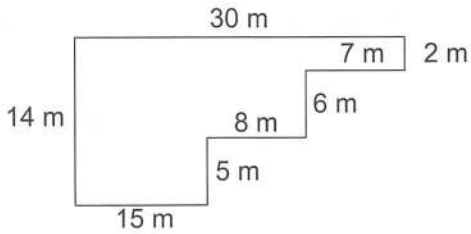
Perimeter = _____ cm

4.



Perimeter = _____ m

5.

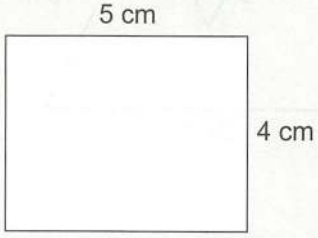


Perimeter = _____ m

Use the formula to find the area of figures

Find the area and perimeter of each figure. **[10 marks]**

Example:



Area = 20 cm^2

Perimeter = 18 cm

Area = Length × Breadth
= 5 × 4
= 20 cm^2

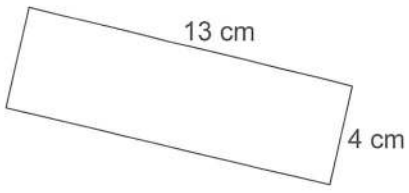
Perimeter = Length + Breadth + Length + Breadth
= 5 + 4 + 5 + 4
= 18 cm

1.

Area = _____ m^2

Perimeter = _____ m

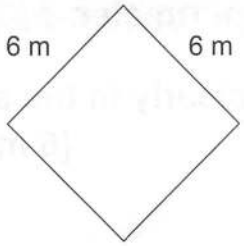
2.



Area = _____ cm^2

Perimeter = _____ cm

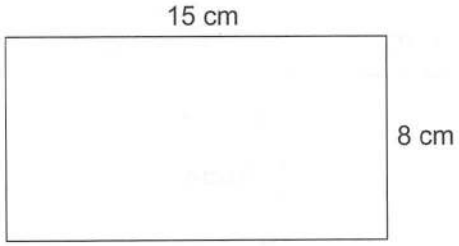
3.



Area = _____ m^2

Perimeter = _____ m

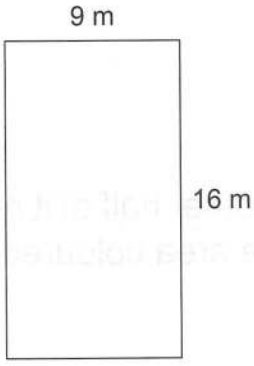
4.



Area = _____ cm^2

Perimeter = _____ cm

5.



Area = _____ m^2

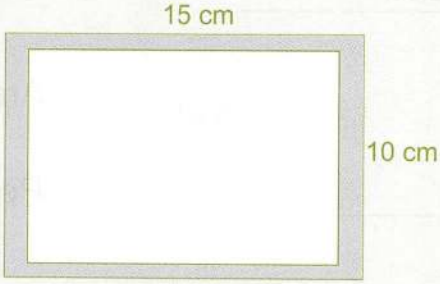
Perimeter = _____ m

Solve word problems related to area and perimeter

Do these word problems. Show your working clearly in the space provided. **[6 marks]**

Examples:

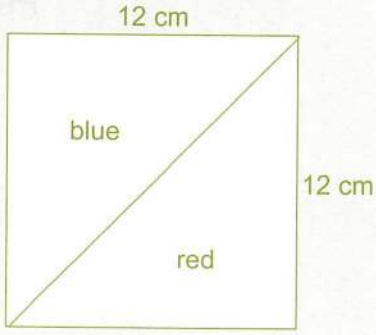
Stacey wants to decorate the edge of her photo frame with lace. The photo frame is 15 cm by 10 cm. How much lace will Stacey need?



15 + 10 + 15 + 10 = 50 cm

Stacey will need **50 cm** of lace.

George colours half of a square blue and the other half of it red. If the square has a side of 12 cm, what is the area coloured in blue?



$12 \times 12 = 144 \text{ cm}^2$

$144 \div 2 = 72 \text{ cm}^2$

The area coloured in blue is **72 cm²**.

1. Andrew is making a rectangle using a piece of wire. The rectangle is 14 cm by 18 cm. How much wire does Andrew need?

2. Mary mops her room. Her room is 6 m by 8 m. What is the area that Mary mops?

3. Jerry is jogging around a square field. If he has jogged 240 m after one round, what is the length of each side of the square field?

4. Mr Wilson plants carrots along a plot of soil that measures 2 m by 50 m. What is the area of the plot of soil?

5. A farmer wants to build a fence around the rectangular compound of his house. The compound is 16 m by 20 m. How long will the fence be?

6. Stephanie paints her living room wall. The wall is 9 m by 4 m. What is the area that Stephanie paints?

Do Review 7 to practise on Angles, Perpendicular and Parallel Lines and Area and Perimeter.
Try the challenging Non-Routine Questions 2 for further application.
Go to **My SAPeducation App** or www.sapgrp.com
Test yourself! Do Revision Test 2 on units 9 to 16. Get your answers marked for Revision Test 2 by Geniebook! (See first page of book for instructions.)

SAP Education

CELEBRATING 40 YEARS

LEARNING MATHEMATICS

For Primary Levels

3

Solutions

Unit 1: Numbers within 10 000

Count and write numbers within 10 000 in numerals and words

(A) 1. 3579
2. 4682
3. 1099
4. 5555
5. 8806
6. 9390
7. 2772
8. 7101
9. 9876
10. 6054

(B) 1. 3625
2. 9099
3. 6208
4. 5817
5. 8035
6. 4156
7. 7380
8. 2571
9. 1462
10. 9743

(C) 1. nine thousand, six hundred and ninety-three
2. four thousand, three hundred and thirteen
3. eight thousand, four hundred and forty
4. seven thousand and fifteen
5. six thousand, five hundred and five
6. one thousand, two hundred and eighty-nine
7. five thousand, nine hundred and seventy-four
8. three thousand, seven hundred and twenty-one
9. two thousand, eight hundred and sixty-seven
10. nine thousand, one hundred and fifty-two

Understand the place value of numbers within 10 000

(A) 1. (a)

Thousands	Hundreds	Tens	Ones
8	4	2	9

(b) 8; 4; 2; 9
(c) 8000; 400; 20; 9

2. (a)

Thousands	Hundreds	Tens	Ones
5	7	4	1

(b) 5; 7; 4; 1
(c) 5000; 700; 40; 1

3. (a)

Thousands	Hundreds	Tens	Ones
7	3	6	8

(b) 7; 3; 6; 8
(c) 7000; 300; 60; 8

4. (a)

Thousands	Hundreds	Tens	Ones
4	2	1	5

(b) 4; 2; 1; 5
(c) 4000; 200; 10; 5

5. (a)

Thousands	Hundreds	Tens	Ones
9	0	8	4

(b) 9; 0; 8; 4
(c) 9000; 0; 80; 4

(B) 1. 9361
2. 7075
3. 2843
4. 5109
5. 8264

(C) 1. 6000
2. 0
3. 50
4. 3
5. 40
6. 800
7. 2000
8. 600
9. 20
10. 9

Compare and arrange numbers within 10 000

(A) 1. 5178, 3871
3871, 5178
2. 2129, 2092
2092, 2129
3. 7374, 7347
7347, 7374
4. 8605, 7650
7650, 8605
5. 4949, 4944
4944, 4949

(B) 1. 8942, 8294
2. 1047, 1704
3. 3010, 3001
4. 4196, 8196
5. 5737, 5377
6. 6083, 6308
7. 9851, 9815
8. 7205, 7250
9. 2642, 2462
10. 3172, 3217

(C) 1. 6900, 8500
6900 is smaller than 8500.
2. 5520, 5560
5560 is greater than 5520.
3. 8300, 9900
8300 is smaller than 9900.
4. 4045, 4056
4056 is greater than 4045.
5. 7740, 7770
7740 is smaller than 7770.

(D) 1. smaller
2. greater
3. greater
4. greater
5. smaller

(E) 1. 4123
2. 8658
3. 6097
4. 5525
5. 9001

(F) 1. 3653
2. 7128
3. 2305
4. 6942
5. 4587

(G) 1. 4614
2. 9999
3. 5551
4. 7863
5. 2745

(H) 1. 2468
2. 3829
3. 2056
4. 6498
5. 1073

(I) 1. 9316, 6193, 3619, 1936
2. 5850, 5805, 5508, 5058
3. 9963, 9396, 6939, 3699
4. 4210, 4120, 2104, 2014
5. 8616, 8116, 6881, 6818

(J) 1. 1424, 2424, 4424, 8424
2. 8001, 8011, 8101, 8118
3. 4025, 4520, 5045, 5240
4. 3369, 3693, 6339, 6933
5. 4169, 4619, 4691, 4916

(K) 1. 4321
2. 5678
3. 4312
4. 5687
5. 9201
6. 3568
7. 7412
8. 3589

Complete number patterns

(A) 1. (a) 2469
(b) 2368
(c) 3468
(d) 2458
(e) 2568
(f) 2467
(g) 2478
(h) 1468

2. (a) 3569
(b) 3679
(c) 3578
(d) 4579
(e) 3479
(f) 3580
(g) 2579
(h) 3589

(B) 1. **9124**
2. **5515**
3. **2348**
4. **9498**
5. **7774**
6. **1621**
7. **6206**
8. **5597**
9. **40**
10. **500**
11. **6**
12. **50**
13. **2000**
14. **5**
15. **400**
16. **2000**

(C) 1. 1540, 1545, **1550**, **1555**, 1560 (+5 +5 +5 +5)

2. 4869, **4769**, 4669, 4569, **4469** (−100 −100 −100 −100)

3. 2330, 2340, **2350**, 2360, **2370** (+10 +10 +10 +10)

4. 8719, **7719**, **6719**, 5719, 4719 (−1000 −1000 −1000 −1000)

5. 5876, 5886, **5896**, **5906**, 5916 (+10 +10 +10 +10)

6. 9100, 9050, **9000**, **8950**, 8900 (−50 −50 −50 −50)

7. **6724**, 6824, 6924, **7024**, 7124 (+100 +100 +100 +100)

8. 3978, **3478**, 2978, 2478, **1978** (−500 −500 −500 −500)

9. **4051**, **5051**, 6051, 7051, 8051 (+1000 +1000 +1000 +1000)

10. **7233**, 7223, 7213, 7203, **7193** (−10 −10 −10 −10)

Unit 2: Adding Numbers within 10 000

Add numbers within 10 000

(A) 1. **3856**
2. **7678**
3. **8767**
4. **9968**
5. **9849**

(B) 1.
$$\begin{array}{r} 5\,2\,1\,0 \\ +\,4\,6\,8\,9 \\ \hline 9\,8\,9\,9 \end{array}$$

2.
$$\begin{array}{r} 4\,0\,3\,7 \\ +\quad 2\,3\,2 \\ \hline 4\,2\,6\,9 \end{array}$$

3.
$$\begin{array}{r} 6\,5\,1\,2 \\ +\,3\,0\,7\,6 \\ \hline 9\,5\,8\,8 \end{array}$$

4.
$$\begin{array}{r} 4\,3\,7\,8 \\ +\,1\,5\,2\,1 \\ \hline 5\,8\,9\,9 \end{array}$$

5.
$$\begin{array}{r} 5\,3\,2\,1 \\ +\,3\,4\,3\,5 \\ \hline 8\,7\,5\,6 \end{array}$$

6.
$$\begin{array}{r} 5\,3 \\ +\,3\,6\,1\,2 \\ \hline 3\,6\,6\,5 \end{array}$$

7.
$$\begin{array}{r} 2\,4\,5\,0 \\ +\,2\,5\,2\,8 \\ \hline 4\,9\,7\,8 \end{array}$$

8.
$$\begin{array}{r} 6\,6\,4\,2 \\ +\,2\,0\,4\,5 \\ \hline 8\,6\,8\,7 \end{array}$$

9.
$$\begin{array}{r} 4\,1\,6\,2 \\ +\,5\,4\,1\,7 \\ \hline 9\,5\,7\,9 \end{array}$$

10.
$$\begin{array}{r} 5\,6\,5\,2 \\ +\,2\,2\,4\,4 \\ \hline 7\,8\,9\,6 \end{array}$$

Perform addition by regrouping ones, tens and hundreds

(A) 1. 4078 + 3659 = **7737**
$$\begin{array}{r} {\scriptstyle 1\,1} \\ 4\,0\,7\,8 \\ +\,3\,6\,5\,9 \\ \hline 7\,7\,3\,7 \end{array}$$

2. 6528 + 1473 = **8001**
$$\begin{array}{r} {\scriptstyle 1\,1\,1} \\ 6\,5\,2\,8 \\ +\,1\,4\,7\,3 \\ \hline 8\,0\,0\,1 \end{array}$$

3. 4699 + 5277 = **9976**
$$\begin{array}{r} {\scriptstyle 1\,1} \\ 4\,6\,9\,9 \\ +\,5\,2\,7\,7 \\ \hline 9\,9\,7\,6 \end{array}$$

4. 3965 + 2245 = **6210**
$$\begin{array}{r} {\scriptstyle 1\,1\,1} \\ 3\,9\,6\,5 \\ +\,2\,2\,4\,5 \\ \hline 6\,2\,1\,0 \end{array}$$

5. 2856 + 4786 = **7642**
$$\begin{array}{r} {\scriptstyle 1\,1\,1} \\ 2\,8\,5\,6 \\ +\,4\,7\,8\,6 \\ \hline 7\,6\,4\,2 \end{array}$$

(B) 1.
$$\begin{array}{r} {\scriptstyle 1\,1\,1} \\ 1\,7\,4\,5 \\ +\,6\,4\,8\,7 \\ \hline 8\,2\,3\,2 \end{array}$$

2.
$$\begin{array}{r} {\scriptstyle 1\,1} \\ 8\,4\,9\,9 \\ +\,1\,3\,2\,4 \\ \hline 9\,8\,2\,3 \end{array}$$

3.
$$\begin{array}{r} {\scriptstyle 1} \\ 3\,3\,5\,6 \\ +\,4\,1\,3\,4 \\ \hline 7\,4\,9\,0 \end{array}$$

4.
$$\begin{array}{r} {\scriptstyle 1} \\ 4\,3\,4\,8 \\ +\,1\,6\,2\,5 \\ \hline 5\,9\,7\,3 \end{array}$$

5.
$$\begin{array}{r} {\scriptstyle 1} \\ 7\,4\,3\,0 \\ +\,1\,9\,3\,2 \\ \hline 9\,3\,6\,2 \end{array}$$

6.
$$\begin{array}{r} {\scriptstyle 1} \\ 2\,2\,8\,2 \\ +\,5\,4\,5\,3 \\ \hline 7\,7\,3\,5 \end{array}$$

7.
$$\begin{array}{r} {\scriptstyle 1\,1} \\ 4\,9\,0\,8 \\ +\,1\,7\,6\,7 \\ \hline 6\,6\,7\,5 \end{array}$$

8.
$$\begin{array}{r} {\scriptstyle 1\,1} \\ 6\,2\,7\,4 \\ +\,1\,5\,3\,8 \\ \hline 7\,8\,1\,2 \end{array}$$

9.
$$\begin{array}{r} {\scriptstyle 1\,1} \\ 9\,1\,2\,6 \\ +\quad 1\,8\,4 \\ \hline 9\,3\,1\,0 \end{array}$$

10.
$$\begin{array}{r} {\scriptstyle 1\,1} \\ 4\,8\,7\,3 \\ +\,4\,7\,8\,3 \\ \hline 9\,6\,5\,6 \end{array}$$

11.
$$\begin{array}{r} {\scriptstyle 1} \\ 5\,4\,8\,0 \\ +\,2\,3\,8\,5 \\ \hline 7\,8\,6\,5 \end{array}$$

12.
$$\begin{array}{r} {\scriptstyle 1\,1\,1} \\ 3\,8\,6\,9 \\ +\,2\,4\,3\,5 \\ \hline 6\,3\,0\,4 \end{array}$$

13.
$$\begin{array}{r} {\scriptstyle 1\,1} \\ 3\,8\,6\,3 \\ +\,5\,5\,7\,6 \\ \hline 9\,4\,3\,9 \end{array}$$

14.
$$\begin{array}{r} {\scriptstyle 1} \\ 5\,6\,5\,7 \\ +\,3\,6\,3\,8 \\ \hline 9\,2\,9\,5 \end{array}$$

15.
$$\begin{array}{r} {\scriptstyle 1} \\ 5\,3\,7\,5 \\ +\,2\,9\,1\,7 \\ \hline 8\,2\,9\,2 \end{array}$$

16.
$$\begin{array}{r} {\scriptstyle 1} \\ 6\,2\,8\,1 \\ +\,1\,1\,9\,8 \\ \hline 7\,4\,7\,9 \end{array}$$

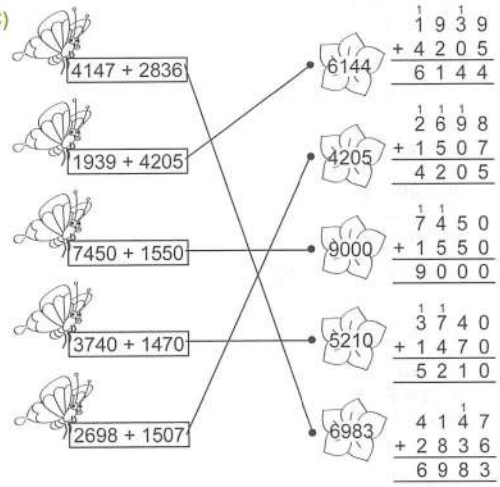
17.
$$\begin{array}{r} {\scriptstyle 1} \\ 4\,6\,3\,3 \\ +\,3\,0\,4\,7 \\ \hline 7\,6\,8\,0 \end{array}$$

18.
$$\begin{array}{r} {\scriptstyle 1} \\ 2\,2\,8\,2 \\ +\,4\,0\,6\,0 \\ \hline 6\,3\,4\,2 \end{array}$$

19.
$$\begin{array}{r} {\scriptstyle 1\,1} \\ 3\,6\,3\,2 \\ +\,6\,2\,6\,9 \\ \hline 9\,9\,0\,1 \end{array}$$

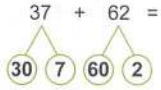
20.
$$\begin{array}{r} {\scriptstyle 1\,1\,1} \\ 4\,9\,5\,6 \\ +\,3\,9\,6\,5 \\ \hline 8\,9\,2\,1 \end{array}$$

(C)



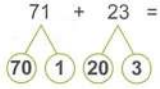
Add numbers mentally

(A) 1. 37 + 62 = 99



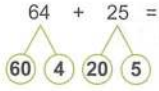
30 + 60 = 90
7 + 2 = 9
90 + 9 = 99

2. 71 + 23 = 94



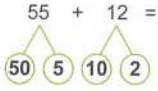
70 + 20 = 90
1 + 3 = 4
90 + 4 = 94

3. 64 + 25 = 89



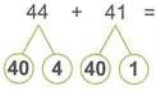
60 + 20 = 80
4 + 5 = 9
80 + 9 = 89

4. 55 + 12 = 67



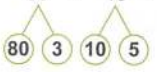
50 + 10 = 60
5 + 2 = 7
60 + 7 = 67

5. 44 + 41 = 85



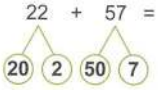
40 + 40 = 80
4 + 1 = 5
80 + 5 = 85

6. 83 + 15 = 98



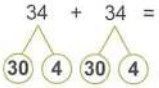
80 + 10 = 90
3 + 5 = 8
90 + 8 = 98

7. 22 + 57 = 79



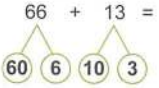
20 + 50 = 70
2 + 7 = 9
70 + 9 = 79

8. 34 + 34 = 68



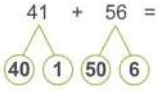
30 + 30 = 60
4 + 4 = 8
60 + 8 = 68

9. 66 + 13 = 79



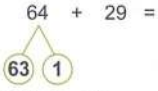
60 + 10 = 70
6 + 3 = 9
70 + 9 = 79

10. 41 + 56 = 97



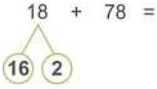
40 + 50 = 90
1 + 6 = 7
90 + 7 = 97

(B) 1. 64 + 29 = 93



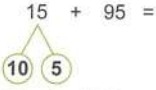
29 + 1 = 30
63 + 30 = 93

2. 18 + 78 = 96



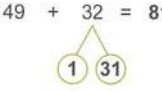
78 + 2 = 80
16 + 80 = 96

3. 15 + 95 = 110



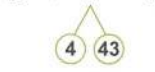
95 + 5 = 100
10 + 100 = 110

4. 49 + 32 = 81



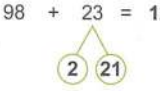
49 + 1 = 50
50 + 31 = 81

5. 46 + 47 = 93



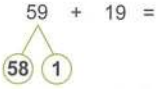
46 + 4 = 50
50 + 43 = 93

6. 98 + 23 = 121



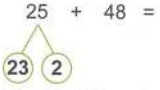
98 + 2 = 100
100 + 21 = 121

7. 59 + 19 = 78



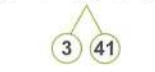
19 + 1 = 20
58 + 20 = 78

8. 25 + 48 = 73



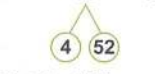
48 + 2 = 50
23 + 50 = 73

9. 37 + 44 = 81



37 + 3 = 40
40 + 41 = 81

10. 96 + 56 = 152



96 + 4 = 100
100 + 52 = 152

Review 1 (Questions available online.)

1. one thousand, nine hundred and fifteen
2. six thousand, three hundred and six
3. **3012**
4. **8228**
5. $\begin{array}{r} {\scriptstyle 1\ 1\ }\\ 4379\\ +2468\\ \hline 6847 \end{array}$
6. $\begin{array}{r} {\scriptstyle 1\ 1\ }\\ 1002\\ +2899\\ \hline 3901 \end{array}$
7. $\begin{array}{r} {\scriptstyle 1\ 1\ }\\ 5385\\ +2418\\ \hline 7803 \end{array}$
8. $\begin{array}{r} {\scriptstyle 1\ }\\ 4016\\ +3849\\ \hline 7865 \end{array}$
9. **4798**
10. **1050**
11. **3717**
12. **6230**
13. +10 +10 +10 +10
    4614, 4624, **4634**, **4644**, 4654
14. −400 −400 −400 −400
    8960, **8560**, 8160, 7760, **7360**
15. **4680, 4860, 6048, 6840**
16. **5213, 3152, 2531, 1325**
17. (a) **2**
    (b) **6**
    (c) **hundreds**
    (d) **3**
18. 7096 + 1845 = **8941**

$\begin{array}{r} {\scriptstyle 1\ 1\ }\\ 7096\\ +1845\\ \hline 8941 \end{array}$

19. 36 + 53 = **89**

    (30) (6) (50) (3)

    30 + 50 = 80
    6 + 3 = 9
    80 + 9 = 89
20. 45 + 97 = **142**

    (42) (3)

    97 + 3 = 100
    42 + 100 = 142

Unit 3: Subtracting Numbers within 10 000

Subtract numbers within 10 000

(A) 1. **3101**
2. **6833**
3. **2305**
4. **3214**
5. **1016**

(B) 1. $\begin{array}{r} 3869\\ -\ 235\\ \hline 3634 \end{array}$

2. $\begin{array}{r} 7787\\ -4325\\ \hline 3462 \end{array}$

3. $\begin{array}{r} 6848\\ -2005\\ \hline 4843 \end{array}$

4. $\begin{array}{r} 2426\\ -1310\\ \hline 1116 \end{array}$

5. $\begin{array}{r} 8818\\ -7107\\ \hline 1711 \end{array}$

6. $\begin{array}{r} 4945\\ -2632\\ \hline 2313 \end{array}$

7. $\begin{array}{r} 5794\\ -3780\\ \hline 2014 \end{array}$

8. $\begin{array}{r} 9697\\ -4477\\ \hline 5220 \end{array}$

9. $\begin{array}{r} 5589\\ -1368\\ \hline 4221 \end{array}$

10. $\begin{array}{r} 9936\\ -6823\\ \hline 3113 \end{array}$

Perform subtraction by regrouping ones, tens, hundreds and thousands

1. $\begin{array}{r} 5\ {\scriptstyle 7}\ 8\ {\scriptstyle 11}\ 1\\ -\ 4\ 0\ 5\ 8\\ \hline 1\ 8\ 2\ 3 \end{array}$

2. $\begin{array}{r} 2\ 9\ {\scriptstyle 8}\ 0\ {\scriptstyle 10}\\ -\ \ 8\ 9\ 0\\ \hline 2\ 0\ 1\ 0 \end{array}$

3. $\begin{array}{r} 4\ 1\ 3\ {\scriptstyle 2}\ 6\\ -2\ 1\ 2\ 8\\ \hline 2\ 0\ 0\ 8 \end{array}$

4. $\begin{array}{r} {\scriptstyle 6}\ 7\ {\scriptstyle 14}\ 3\ 1\\ -\ 5\ 6\ 1\ 1\\ \hline 1\ 8\ 2\ 0 \end{array}$

5. $\begin{array}{r} {\scriptstyle 8}\ 9\ {\scriptstyle 10}\ 3\ {\scriptstyle 12}\ 0\\ -\ 3\ 6\ 8\ 4\\ \hline 5\ 4\ 4\ 6 \end{array}$

6. $\begin{array}{r} {\scriptstyle 7}\ 8\ {\scriptstyle 12}\ 2\ {\scriptstyle 8}\ 2\\ -\ 2\ 5\ 0\ 5\\ \hline 5\ 7\ 8\ 7 \end{array}$

7. $\begin{array}{r} {\scriptstyle 4}\ 5\ {\scriptstyle 13}\ 3\ {\scriptstyle 8}\ 9\ {\scriptstyle 12}\ 2\\ -\ 2\ 8\ 8\ 6\\ \hline 2\ 5\ 0\ 6 \end{array}$

8. $\begin{array}{r} 4\ 9\ 8\ {\scriptstyle 7}\ {\scriptstyle 18}\ 8\\ -\ 3\ 9\ 6\ 9\\ \hline 1\ 0\ 1\ 9 \end{array}$

9. $\begin{array}{r} {\scriptstyle 8}\ 9\ {\scriptstyle 12}\ 3\ {\scriptstyle 16}\ 6\ 8\\ -\ 1\ 4\ 8\ 7\\ \hline 7\ 8\ 8\ 1 \end{array}$

10. $\begin{array}{r} {\scriptstyle 1}\ 2\ {\scriptstyle 12}\ 3\ {\scriptstyle 16}\ 7\ {\scriptstyle 16}\ 6\\ -\ 1\ 4\ 8\ 7\\ \hline 8\ 8\ 9 \end{array}$

11. $\begin{array}{r} {\scriptstyle 7}\ 8\ {\scriptstyle 9}\ 0\ {\scriptstyle 9}\ 0\ {\scriptstyle 10}\ 0\\ -\ 4\ 6\ 5\ 9\\ \hline 3\ 3\ 4\ 1 \end{array}$

12. $\begin{array}{r} {\scriptstyle 2}\ 3\ {\scriptstyle 14}\ 5\ {\scriptstyle 16}\ 7\ {\scriptstyle 16}\ 6\\ -\ 1\ 8\ 9\ 9\\ \hline 1\ 6\ 7\ 7 \end{array}$

13. $\begin{array}{r} {\scriptstyle 5}\ 6\ {\scriptstyle 9}\ 0\ {\scriptstyle 9}\ 0\ {\scriptstyle 15}\ 5\\ -\ 4\ 7\ 6\ 9\\ \hline 1\ 2\ 3\ 6 \end{array}$

14. $\begin{array}{r} {\scriptstyle 7}\ 8\ {\scriptstyle 9}\ 0\ {\scriptstyle 10}\ 1\ {\scriptstyle 10}\ 0\\ -\ 3\ 8\ 6\ 5\\ \hline 4\ 1\ 4\ 5 \end{array}$

15. $\begin{array}{r} {\scriptstyle 4}\ 5\ {\scriptstyle 13}\ 3\ {\scriptstyle 4}\ 5\ {\scriptstyle 13}\ 3\\ -\ 1\ 5\ 2\ 6\\ \hline 3\ 8\ 2\ 7 \end{array}$

16. $\begin{array}{r} {\scriptstyle 2}\ 3\ {\scriptstyle 12}\ 3\ {\scriptstyle 14}\ 5\ {\scriptstyle 10}\ 0\\ -\ 1\ 5\ 9\ 8\\ \hline 1\ 7\ 5\ 2 \end{array}$

17. $\begin{array}{r} 6\ 2\ {\scriptstyle 1}\ 0\ {\scriptstyle 10}\ 6\\ -\ 2\ 0\ 6\ 2\\ \hline 4\ 1\ 4\ 4 \end{array}$

18. $\begin{array}{r} {\scriptstyle 8}\ 9\ {\scriptstyle 10}\ 1\ {\scriptstyle 11}\ 2\ {\scriptstyle 13}\ 3\\ -\ 2\ 5\ 7\ 6\\ \hline 6\ 5\ 4\ 7 \end{array}$

19. $\begin{array}{r} {\scriptstyle 6}\ 7\ {\scriptstyle 9}\ 0\ {\scriptstyle 10}\ 0\ 7\\ -\ 4\ 3\ 3\ 4\\ \hline 2\ 6\ 7\ 3 \end{array}$

20. $\begin{array}{r} {\scriptstyle 7}\ 8\ {\scriptstyle 10}\ 1\ {\scriptstyle 17}\ 8\ {\scriptstyle 11}\ 1\\ -\ 1\ 9\ 8\ 9\\ \hline 6\ 1\ 9\ 2 \end{array}$

Subtract numbers mentally

(A) 1. 99 − 13 = **86**

(90) (9) (10) (3)

90 − 10 = 80
9 − 3 = 6
80 + 6 = 86

2. 67 − 44 = **23**

(60) (7) (40) (4)

60 − 40 = 20
7 − 4 = 3
20 + 3 = 23

3. 86 − 32 = **54**

(80) (6) (30) (2)

80 − 30 = 50
6 − 2 = 4
50 + 4 = 54

4. 45 – 24 = **21**

(40) (5) (20) (4)

40 – 20 = 20
5 – 4 = 1
20 + 1 = 21

5. 79 – 61 = **18**

(70) (9) (60) (1)

70 – 60 = 10
9 – 1 = 8
10 + 8 = 18

6. 57 – 16 = **41**

(50) (7) (10) (6)

50 – 10 = 40
7 – 6 = 1
40 + 1 = 41

7. 88 – 23 = **65**

(80) (8) (20) (3)

80 – 20 = 60
8 – 3 = 5
60 + 5 = 65

8. 65 – 31 = **34**

(60) (5) (30) (1)

60 – 30 = 30
5 – 1 = 4
30 + 4 = 34

9. 96 – 54 = **42**

(90) (6) (50) (4)

90 – 50 = 40
6 – 4 = 2
40 + 2 = 42

10. 77 – 42 = **35**

(70) (7) (40) (2)

70 – 40 = 30
7 – 2 = 5
30 + 5 = 35

(B) 1. 54 – 27 = **27**

(24) (3)

54 – 24 = 30
30 – 3 = 27

2. 71 – 49 = **22**

(41) (8)

71 – 41 = 30
30 – 8 = 22

3. 45 – 18 = **27**

(15) (3)

45 – 15 = 30
30 – 3 = 27

4. 83 – 55 = **28**

(53) (2)

83 – 53 = 30
30 – 2 = 28

5. 66 – 29 = **37**

(26) (3)

66 – 26 = 40
40 – 3 = 37

6. 90 – 62 = **28**

(60) (2)

90 – 60 = 30
30 – 2 = 28

7. 72 – 33 = **39**

(32) (1)

72 – 32 = 40
40 – 1 = 39

8. 51 – 16 = **35**

(11) (5)

51 – 11 = 40
40 – 5 = 35

9. 80 – 47 = **33**

(40) (7)

80 – 40 = 40
40 – 7 = 33

10. 44 – 28 = **16**

(24) (4)

44 – 24 = 20
20 – 4 = 16

Unit 4: Word Problems on Addition and Subtraction

Solve up to two-step word problems related to addition and subtraction

1. (a) Sandy [236]
Linda [?] 127

236 – 127 = 109
Linda has **109** stickers.

$$\begin{array}{r} {}^{2}\not{2}\,{}^{16}\not{3}\not{6} \\ -\ 1\ 2\ 7 \\ \hline 1\ 0\ 9 \end{array}$$

(b) Sandy [236] Linda [109]
?

236 + 109 = 345
They have **345** stickers altogether.

$$\begin{array}{r} {}^{1}\ \ \\ 2\ 3\ 6 \\ +\ 1\ 0\ 9 \\ \hline 3\ 4\ 5 \end{array}$$

2. Ken [3280 m] [568 m] ?
Steve [?]

3280 + 568 = 3848
Steve travels 3848 m.
3280 + 3848 = 7128
They travel **7128 m** altogether.

$$\begin{array}{r} {}^{1}\ \ \ \\ 3\ 2\ 8\ 0 \\ +\ \ 5\ 6\ 8 \\ \hline 3\ 8\ 4\ 8 \end{array}$$

$$\begin{array}{r} {}^{1\ 1}\ \ \ \\ 3\ 2\ 8\ 0 \\ +\ 3\ 8\ 4\ 8 \\ \hline 7\ 1\ 2\ 8 \end{array}$$

3. (a) Tina 2345 ?
Candice 3542

$$\begin{array}{r} {}^{4}\cancel{3}\,{}^{13}\cancel{5}\,{}^{12}\cancel{4}\,2 \\ -\ 2\,3\,4\,5 \\ \hline 1\,1\,9\,7 \end{array}$$

3542 – 2345 = 1197
Candice has **1197** more stamps than Tina.

(b) Tina 2345 | Candice 3542
?

$$\begin{array}{r} 2\,3\,4\,5 \\ +\ 3\,5\,4\,2 \\ \hline 5\,8\,8\,7 \end{array}$$

2345 + 3542 = 5887
They have **5887** stamps altogether.

4. Joslin $2140
Linda $150
Tracy ? $270

$$\begin{array}{r} 2\,1\,4\,0 \\ +\ \ 1\,5\,0 \\ \hline 2\,2\,9\,0 \end{array}$$

$2140 + $150 = $2290
Linda earns $2290.

$$\begin{array}{r} 2\,2\,9\,0 \\ -\ \ 2\,7\,0 \\ \hline 2\,0\,2\,0 \end{array}$$

$2290 – $270 = $2020
Tracy earns **$2020**.

5. (a) Rebecca $2080
Diana ? $275

$$\begin{array}{r} {}^{1}\cancel{2}\,{}^{10}\cancel{0}\,{}^{7}\cancel{8}\,{}^{10}\cancel{0} \\ -\ \ 2\,7\,5 \\ \hline 1\,8\,0\,5 \end{array}$$

$2080 – $275 = $1805
Diana pays **$1805** for her television set.

(b) Rebecca $2080 | Diana $1805
?

$$\begin{array}{r} 2\,0\,8\,0 \\ +\ 1\,8\,0\,5 \\ \hline 3\,8\,8\,5 \end{array}$$

$2080 + $1805 = $3885
Both television sets cost **$3885**.

6. girls 3865 | 1459 ?
boys ?

$$\begin{array}{r} {}^{1}3\,{}^{1}8\,{}^{1}6\,5 \\ +\ 1\,4\,5\,9 \\ \hline 5\,3\,2\,4 \end{array}$$

3865 + 1459 = 5324
5324 boys went to the concert.
5324 + 3865 = 9189
9189 children went to the concert altogether.

$$\begin{array}{r} {}^{1}5\,3\,2\,4 \\ +\ 3\,8\,6\,5 \\ \hline 9\,1\,8\,9 \end{array}$$

7. Saturday 2015 | 3585 ?
Sunday ?

$$\begin{array}{r} {}^{1}2\,{}^{1}0\,1\,5 \\ +\ 3\,5\,8\,5 \\ \hline 5\,6\,0\,0 \end{array} \qquad \begin{array}{r} 5\,6\,0\,0 \\ +\ 2\,0\,1\,5 \\ \hline 7\,6\,1\,5 \end{array}$$

2015 + 3585 = 5600
5600 people attended the carnival on Sunday.
5600 + 2015 = 7615
7615 people attended the carnival on both days.

8. Monday 1075 kg | ?
Tuesday ? 360 kg

$$\begin{array}{r} {}^{0}\cancel{1}\,{}^{10}\cancel{0}\,7\,5 \\ -\ \ 3\,6\,0 \\ \hline 7\,1\,5 \end{array} \qquad \begin{array}{r} 1\,0\,7\,5 \\ +\ \ 7\,1\,5 \\ \hline 1\,7\,9\,0 \end{array}$$

1075 – 360 = 715
He used 715 kg of cement on Tuesday.
1075 + 715 = 1790
He used **1790 kg** of cement on both days.

9. (a) van $5180
motorcycle $3960 ?

$$\begin{array}{r} {}^{4}\cancel{5}\,{}^{11}\cancel{1}\,8\,0 \\ -\ 3\,9\,6\,0 \\ \hline 1\,2\,2\,0 \end{array}$$

$5180 – $3960 = $1220
The second-hand motorcycle is **$1220** cheaper than the second-hand van.

(b) van $5180 | motorcycle $3960
?

$$\begin{array}{r} {}^{1}5\,{}^{1}1\,8\,0 \\ +\ 3\,9\,6\,0 \\ \hline 9\,1\,4\,0 \end{array}$$

$5180 + $3960 = $9140
It will cost **$9140** to buy both the second-hand van and the second-hand motorcycle.

10. (a) last year $2387
this year ? $500

$$\begin{array}{r} {}^{1}2\,{}^{13}\cancel{3}\,8\,7 \\ -\ \ 5\,0\,0 \\ \hline 1\,8\,8\,7 \end{array}$$

$2387 – $500 = $1887
Joanna could spend **$1887** on clothes this year.

(b) $4000
$1887 ?

$$\begin{array}{r} {}^{3}\cancel{4}\,{}^{9}0\,{}^{9}0\,{}^{10}0 \\ -\ 1\,8\,8\,7 \\ \hline 2\,1\,1\,3 \end{array}$$

$4000 – $1887 = $2113
She would have overspent by **$2113**.

Review 2 (Questions available online.)

1. $\begin{array}{r} {}^{8}\cancel{9}\,{}^{13}\cancel{3}\,{}^{5}\cancel{6}\,{}^{18}8 \\ -\ 1\,4\,0\,9 \\ \hline \mathbf{7\,9\,5\,9} \end{array}$

2. $\begin{array}{r} {}^{3}\cancel{4}\,{}^{16}\cancel{7}\,{}^{15}5 \\ -\ 1\,8\,9\,0 \\ \hline \mathbf{2\,8\,6\,5} \end{array}$

3. $\begin{array}{r} {}^{7}\cancel{8}\,{}^{11}\cancel{1}\,1\,1 \\ -\ 2\,4\,0\,1 \\ \hline \mathbf{5\,7\,1\,0} \end{array}$

4. $\begin{array}{r} {}^{5}\cancel{6}\,{}^{9}0\,{}^{9}0\,{}^{10}0 \\ -\ 2\,8\,1\,9 \\ \hline \mathbf{3\,1\,8\,1} \end{array}$

5. **3**
$\begin{array}{r} {}^{1}3\,{}^{1}7\,{}^{1}8\,9 \\ +\ 5\,7\,4\,7 \\ \hline 9\,5\,3\,6 \end{array}$

6. **5**
$\begin{array}{r} {}^{1}1\,{}^{1}1\,7\,3 \\ +\ 4\,3\,7\,1 \\ \hline 5\,5\,4\,4 \end{array}$

7. **4217**
$\begin{array}{r} 6\,8\,{}^{5}\cancel{6}\,{}^{15}\cancel{5} \\ -\ 2\,6\,4\,8 \\ \hline 4\,2\,1\,7 \end{array}$

8. **7550**
$\begin{array}{r} {}^{7}\cancel{8}\,{}^{9}0\,{}^{10}0 \\ -\ \ 4\,5\,0 \\ \hline 7\,5\,5\,0 \end{array}$

9. **4889**
$\begin{array}{r} 5\,{}^{8}\cancel{9}\,{}^{9}0\,{}^{10}0 \\ -\ 1\,0\,1\,1 \\ \hline 4\,8\,8\,9 \end{array}$

10. **1115**
$\begin{array}{r} 2\,8\,6\,5 \\ -\ 1\,7\,5\,0 \\ \hline 1\,1\,1\,5 \end{array}$

11. **5550**
$\begin{array}{r} 5\,0\,5\,0 \\ +\ \ 5\,0\,0 \\ \hline 5\,5\,5\,0 \end{array}$

12. 89 – 43 = **46**
(80) (9) (40) (3)
80 – 40 = 40
9 – 3 = 6
40 + 6 = 46

13. 91 – 55 = **36**
(51) (4)
91 – 51 = 40
40 – 4 = 36

14. R: $\begin{array}{r} 5\ 12\ 18 \\ 6\,\cancel{3}\,\cancel{8}\,\cancel{9} \\ -\ 4\ 6\ 9\ 3 \\ \hline 1\ 6\ 9\ 6 \end{array}$ T: $\begin{array}{r} 1\ 1\ 1 \\ 2\ 4\ 1\ 5 \\ +\ 1\ 5\ 9\ 6 \\ \hline 4\ 0\ 1\ 1 \end{array}$

E: $\begin{array}{r} 7\ 11\ 9\ 10 \\ 8\,\cancel{2}\,\cancel{0}\,\cancel{0} \\ -\ 3\ 8\ 6\ 5 \\ \hline 4\ 3\ 3\ 5 \end{array}$ A: $\begin{array}{r} 1 \\ 5\ 1\ 8\ 9 \\ +\ 2\ 6\ 9\ 0 \\ \hline 7\ 8\ 7\ 9 \end{array}$

U: $\begin{array}{r} 2\ 14\ 7\ 17 \\ 3\,\cancel{4}\,\cancel{8}\,\cancel{X} \\ -\ 1\ 5\ 0\ 9 \\ \hline 1\ 9\ 7\ 8 \end{array}$ B: $\begin{array}{r} 4\ 4\ 4\ 4 \\ +\ 2\ 0\ 5\ 5 \\ \hline 6\ 4\ 9\ 9 \end{array}$

N: $\begin{array}{r} 6\ 16\ 16\ 17 \\ \cancel{X}\,\cancel{X}\,\cancel{X}\,\cancel{X} \\ -\ 5\ 9\ 9\ 8 \\ \hline 1\ 7\ 7\ 9 \end{array}$ P: $\begin{array}{r} 1 \\ 1\ 0\ 9\ 0 \\ +\ 2\ 8\ 9\ 5 \\ \hline 3\ 9\ 8\ 5 \end{array}$

P	E	A	N	U	T
3985	4335	7879	1779	1978	4011

B	U	T	T	E	R
6499	1978	4011	4011	4335	1696

15. (a) Sharon: \$2470 + ?; June: \$2745

$\begin{array}{r} 2\ 6\ 14\ 5 \\ 2\,\cancel{7}\,\cancel{4}\,5 \\ -\ 2\ 4\ 7\ 0 \\ \hline 2\ 7\ 5 \end{array}$

\$2745 – \$2470 = \$275

June earns **\$275** more than Sharon.

(b) June: \$2745; Sharon: \$2470; ?

$\begin{array}{r} 1\ 1 \\ 2\ 7\ 4\ 5 \\ +\ 2\ 4\ 7\ 0 \\ \hline 5\ 2\ 1\ 5 \end{array}$

\$2745 + \$2470 = \$5215

They earn **\$5215** altogether.

16. Candy: 2100 + 1900; Andrew: ?

$\begin{array}{r} 1 \\ 2\ 1\ 0\ 0 \\ +\ 1\ 9\ 0\ 0 \\ \hline 4\ 0\ 0\ 0 \end{array}$

2100 + 1900 = 4000

Andrew has 4000 stamps.

$\begin{array}{r} 2\ 1\ 0\ 0 \\ +\ 4\ 0\ 0\ 0 \\ \hline 6\ 1\ 0\ 0 \end{array}$

2100 + 4000 = 6100

They have **6100** stamps altogether.

17. A: 4985; B: 4985 + 1200; C: ? (2350)

$\begin{array}{r} 1 \\ 4\ 9\ 8\ 5 \\ +\ 1\ 2\ 0\ 0 \\ \hline 6\ 1\ 8\ 5 \end{array}$

4985 + 1200 = 6185

Shop B sells 6185 T-shirts.

$\begin{array}{r} 5\ 11 \\ 6\,\cancel{1}\,\cancel{8}\,5 \\ -\ 2\ 3\ 5\ 0 \\ \hline 3\ 8\ 3\ 5 \end{array}$

6185 – 2350 = 3835

Shop C sells **3835** T-shirts.

18. 3967 + 450 = ?

$\begin{array}{r} 1\ 1 \\ 3\ 9\ 6\ 7 \\ +\ \ 4\ 5\ 0 \\ \hline 4\ 4\ 1\ 7 \end{array}$

3967 + 450 = 4417

Roland has 4417 stickers.

4417; ? left; 1050 given

$\begin{array}{r} 3\ 11 \\ 4\,\cancel{4}\,\cancel{1}\,7 \\ -\ 1\ 0\ 5\ 0 \\ \hline 3\ 3\ 6\ 7 \end{array}$

4417 – 1050 = 3367

Roland has **3367** stickers left.

19. August: 4745 km; September: ? (2080 km)

$\begin{array}{r} 6\ 14 \\ 4\,\cancel{7}\,\cancel{4}\,5 \\ -\ 2\ 0\ 8\ 0 \\ \hline 2\ 6\ 6\ 5 \end{array}$

4745 – 2080 = 2665

He drove 2665 km in September.

$\begin{array}{r} 1\ 1\ 1 \\ 4\ 7\ 4\ 5 \\ +\ 2\ 6\ 6\ 5 \\ \hline 7\ 4\ 1\ 0 \end{array}$

4745 + 2665 = 7410

Carl's total driving distance in these two months was **7410 km**.

20. (a) castle: 5000; house: ? (4360)

$\begin{array}{r} 4\ 9\ 10 \\ 5\,\cancel{0}\,\cancel{0}\,0 \\ -\ 4\ 3\ 6\ 0 \\ \hline 6\ 4\ 0 \end{array}$

5000 – 4360 = 640

He used **640** wooden blocks to build the house.

(b) castle: 5000; house: 640; ?

$\begin{array}{r} 5\ 0\ 0\ 0 \\ +\ \ 6\ 4\ 0 \\ \hline 5\ 6\ 4\ 0 \end{array}$

5000 + 640 = 5640

He used **5640** wooden blocks altogether.

Unit 5: Multiplying Numbers by 6, 7, 8 and 9

Multiply numbers by 6

(A) 1. **2 × 6 = 12**
6 × 2 = 12

2. **5 × 6 = 30**
6 × 5 = 30

3. **10 × 6 = 60**
6 × 10 = 60

4. **4 × 6 = 24**
6 × 4 = 24

5. **7 × 6 = 42**
6 × 7 = 42

(B) 1. (a) **6**
(b) **54**
(c) **30**
(d) **0**
(e) **12**
(f) **48**
(g) **42**
(h) **24**
(i) **36**
(j) **18**
(k) **60**

2. (a) **8**
(b) **5**
(c) **7**
(d) **3**
(e) **6**

(C) 1. **30**
24
30, 24
54

2. **30**
12
30, 12
42

3. **30**
18
30, 18
48

4. **60**
24
60, 24
36

5. **60**
12
60, 12
48

6. **60**
18
60, 18
42

Multiply numbers by 7

(A) 1. **4 × 7 = 28**
7 × 4 = 28

2. **6 × 7 = 42**
7 × 6 = 42

3. **9 × 7 = 63**
7 × 9 = 63

4. **5 × 7 = 35**
7 × 5 = 35

5. **8 × 7 = 56**
7 × 8 = 56

(B) 1. (a) 14
(b) 21
(c) 42
(d) 56
(e) 7
(f) 0
(g) 28
(h) 35
(i) 63
(j) 49
(k) 70

2. (a) 4
(b) 10
(c) 8
(d) 2
(e) 9

(C) 1. 35
21
35, 21
56

2. 35
28
35, 28
63

3. 35
14
35, 14
49

4. 70
21
70, 21
49

5. 70
28
70, 28
42

6. 70
14
70, 14
56

Multiply numbers by 8

(A) 1. 5 × 8 = 40
8 × 5 = 40

2. 3 × 8 = 24
8 × 3 = 24

3. 6 × 8 = 48
8 × 6 = 48

4. 2 × 8 = 16
8 × 2 = 16

5. 9 × 8 = 72
8 × 9 = 72

(B) 1. (a) 0
(b) 80
(c) 56
(d) 64
(e) 16
(f) 40
(g) 72
(h) 24
(i) 48
(j) 32
(k) 8

2. (a) 3
(b) 1
(c) 9
(d) 4
(e) 7

(C) 1. 40
16
40, 16
56

2. 40
32
40, 32
72

3. 40
24
40, 24
64

4. 80
16
80, 16
64

5. 80
24
80, 24
56

6. 80
32
80, 32
48

Multiply numbers by 9

(A) 1. 5 × 9 = 45
9 × 5 = 45

2. 2 × 9 = 18
9 × 2 = 18

3. 7 × 9 = 63
9 × 7 = 63

4. 4 × 9 = 36
9 × 4 = 36

5. 10 × 9 = 90
9 × 10 = 90

(B) 1. (a) 27
(b) 36
(c) 18
(d) 9
(e) 0
(f) 90
(g) 81
(h) 72
(i) 45
(j) 54
(k) 63

2. (a) 5
(b) 10
(c) 4
(d) 6
(e) 8

(C) 1. 45
36
45, 36
81

2. 45
27
45, 27
72

3. 45
18
45, 18
63

4. 90
36
90, 36
54

5. 90
27
90, 27
63

6. 90
18
90, 18
72

Multiply numbers by 6, 7, 8 and 9

1. 4 × 6 = 24
6 × 4 = 24

2. 5 × 7 = 35
7 × 5 = 35

3. 8 × 4 = 32
4 × 8 = 32

4. 2 × 9 = 18
9 × 2 = 18

5. 7 × 6 = 42
6 × 7 = 42

6. 7 × 3 = 21
3 × 7 = 21

7. 1 × 8 = 8
8 × 1 = 8

8. 9 × 8 = 72
8 × 9 = 72

Divide numbers using multiplication facts

(A) 1. 30 ÷ 6 = 5
There are 5 balls in each row.

2. 28 ÷ 7 = 4
There are 4 marbles in each container.

3. 27 ÷ 9 = 3
There are 3 students in each team.

4. 48 ÷ 8 = 6
There are 6 crayons in each box.

5. 49 ÷ 7 = 7
There are 49 friends.

6. 40 ÷ 8 = 5
There are 5 round tables.

7. 36 ÷ 6 = 6
There are 6 children.

8. 90 ÷ 9 = 10
There are 10 trays of cookies.

(B) 1. 8 × 9 = 72 72 ÷ 9 = 8
9 × 8 = 72 72 ÷ 8 = 9

2. 7 × 6 = 42 42 ÷ 6 = 7
6 × 7 = 42 42 ÷ 7 = 6

3. 9 × 6 = 54 54 ÷ 6 = 9
6 × 9 = 54 54 ÷ 9 = 6

4. 6 × 5 = 30 30 ÷ 5 = 6
5 × 6 = 30 30 ÷ 6 = 5

5. 9 × 4 = 36 36 ÷ 4 = 9
4 × 9 = 36 36 ÷ 9 = 4

(C) 1. 9
8
9, 8
8, 9

2. 5
7
5, 7
7, 5

3. 3
9
3, 9
9, 3

4. 10
6
10, 6
6, 10

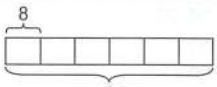
5. **4**
4
4, 7
7, 4

6. **10**
10
10, 8
8, 10

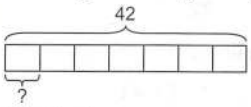
7. **9**
9
9, 6
6, 9

8. **7**
7
7, 9
9, 7

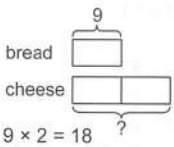
Solve word problems related to multiplication and division

1. 

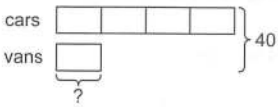
8 × 6 = 48
She bought **48** oranges altogether.

2. 

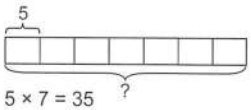
42 ÷ 7 = 6
Each of them has **6** stickers.

3. 

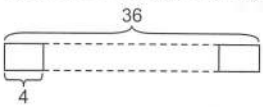
9 × 2 = 18
There are **18** slices of cheese on the tray.

4. 

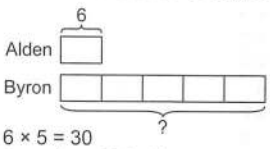
5 units → 40
1 unit → 40 ÷ 5 = 8
There are **8** vans at the car park.

5. 

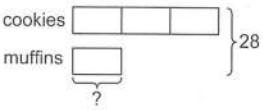
5 × 7 = 35
There are **35** people in the group.

6. 

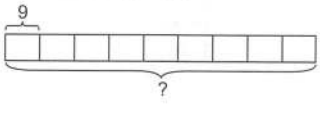
36 ÷ 4 = 9
There are **9** baskets of apples.

7. 

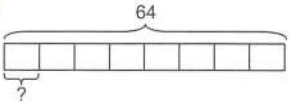
6 × 5 = 30
Byron has **30** bottle caps.

8. 

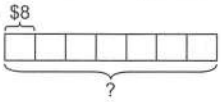
4 units → 28
1 unit → 28 ÷ 4 = 7
She bakes **7** muffins.

9. 

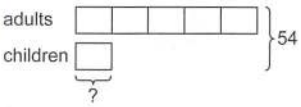
9 × 9 = 81
She uses **81** buttons.

10. 

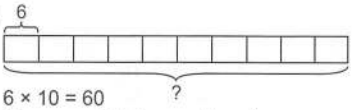
64 ÷ 8 = 8
There were **8** apples in each bag.

11. 

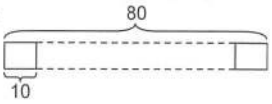
$8 × 7 = $56
She saves **$56** in a week.

12. 

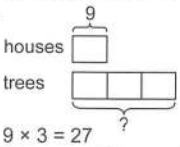
6 units → 54
1 unit → 54 ÷ 6 = 9
There are **9** children in the cinema.

13. 

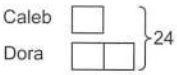
6 × 10 = 60
There are **60** players altogether.

14. 

80 ÷ 10 = 8
Mr Daniels uses **8** boxes.

15. 

9 × 3 = 27
There are **27** trees along the road.

16. 

3 units → 24
1 unit → 24 ÷ 3 = 8
Caleb collects **8** seashells.

Unit 6: Multiplying Numbers

Multiply numbers without regrouping

(A) 1. 112 × 4 = **448**

2. 33 × 2 = **66**

3. 210 × 2 = **420**

4. 302 × 3 = **906**

5. 442 × 2 = **884**

6. 212 × 4 = **848**

7. 31 × 3 = **93**

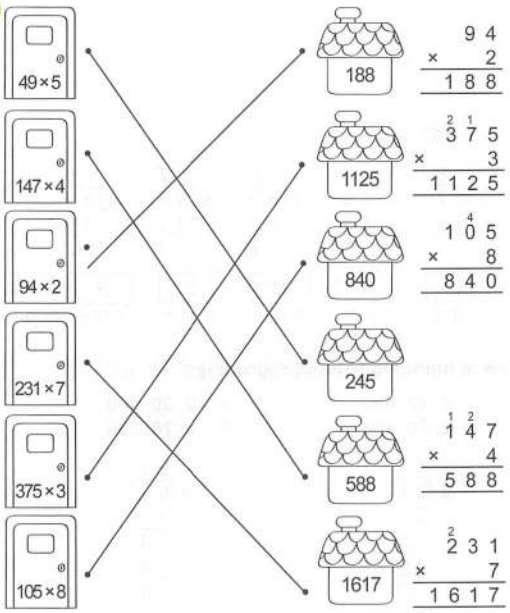
8. 100 × 3 = **300**

9. 121 × 4 = **484**

10. 134 × 2 = **268**

Multiply numbers by regrouping ones, tens, hundreds and thousands

(A)



(B)

	(a) 8	9	(f) 6			(b) 7	1	1
(g) 6			(c) 3	1	0			
1			7			(h) 3		
2				(d) 8	5	6		
	(i) 8		(j) 6			(e) 8	2	6
	8		4					
	2		0					

(a) $112 \times 8 = 896$

(b) $79 \times 9 = 711$

(c) $62 \times 5 = 310$

(d) $214 \times 4 = 856$

(e) $118 \times 7 = 826$

(f) $91 \times 7 = 637$

(g) $102 \times 6 = 612$

(h) $46 \times 8 = 368$

(i) $98 \times 9 = 882$

(j) $80 \times 8 = 640$

(C)

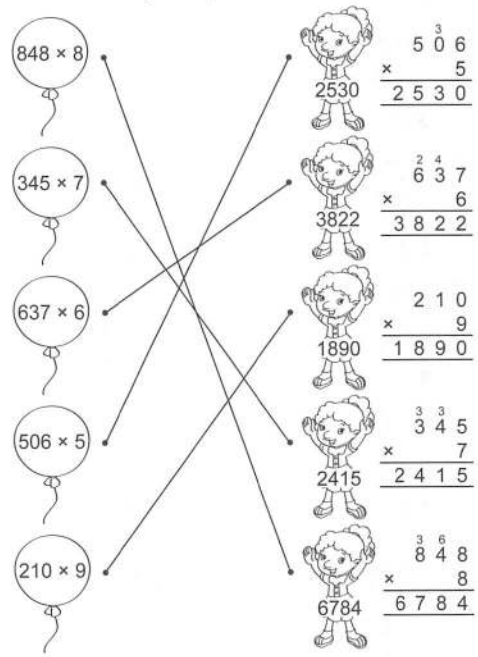
$537 \times 6 = 3222$	B	$416 \times 5 = 2080$	O	$133 \times 7 = 931$	C	$600 \times 2 = 1200$	O	$204 \times 5 = 1020$	W
$743 \times 4 = 2972$	L	$391 \times 8 = 3128$	B	$169 \times 9 = 1521$	N	$824 \times 3 = 2472$	O		

B	O	B	O	T	H	E
1200	2080	1200	2080	3128	3222	1020

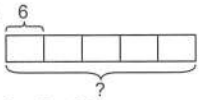
C	L	O	W	N
2472	2972	2080	931	1521

Review 3 (Questions available online.)

1. $8 \times 5 = 40$ $\quad 40 \div 8 = 5$
   $5 \times 8 = 40$ $\quad 40 \div 5 = 8$
2. $4 \times 7 = 28$ $\quad 28 \div 7 = 4$
   $7 \times 4 = 28$ $\quad 28 \div 4 = 7$
3. $147 \times 8 = 1176$
4. $312 \times 3 = 936$
5. $632 \times 4 = 2528$
6. $500 \times 3 = 1500$
7. (a) $49 \div 7 = 7$
   There are **7** marbles in each bowl.
   (b) $42 \div 6 = 7$
   There are **7** students in each team.
   (c) $36 \div 9 = 4$
   There are **4** stacks of books.
   (d) $40 \div 8 = 5$
   There are **5** trays of cupcakes.
8. $848 \times 8 = 6784$
9. $345 \times 7 = 2415$
10. $637 \times 6 = 3822$
11. $506 \times 5 = 2530$
12. $210 \times 9 = 1890$

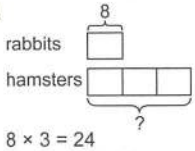


13. **6**
14. **9**
15. **10**
16. **4**
17. 6

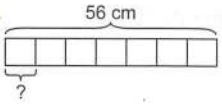


$6 \times 5 = 30$
He needs **30** pieces of planks to construct 5 such chairs.

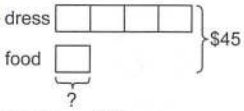
18. 8



$8 \times 3 = 24$
There are **24** hamsters.

19. 

56 ÷ 7 = 8
Each piece of string is **8 cm** long.

20. 

5 units → $45
1 unit → $45 ÷ 5 = $9
She spends **$9** on food.

Unit 7: Dividing Numbers

Find quotient and remainder by dividing

(A) 1. $7\overline{)67}$ → 9 R 4
9; 4

2. $5\overline{)17}$ → 3 R 2
3; 2

3. $3\overline{)25}$ → 8 R 1
8; 1

4. $9\overline{)88}$ → 9 R 7
9; 7

5. $4\overline{)29}$ → 7 R 1
7; 1

6. $6\overline{)52}$ → 8 R 4
8; 4

7. $8\overline{)43}$ → 5 R 3
5; 3

8. $7\overline{)58}$ → 8 R 2
8; 2

9. $5\overline{)33}$ → 6 R 3
6; 3

10. $6\overline{)29}$ → 4 R 5
4; 5

(B) 1. $2\overline{)469}$ → 234 R 1
234; 1

2. $3\overline{)947}$ → 315 R 2
315; 2

3. $4\overline{)671}$ → 167 R 3
167; 3

4. $5\overline{)784}$ → 156 R 4
156; 4

5. $6\overline{)983}$ → 163 R 5
163; 5

(C)

C	A	M	E	R	A
8 R 4	9 R 2	8 R 1	6 R 7	7 R 1	9 R 2

Divide numbers without regrouping

(A) 1. **4; 40; 400**
2. **2; 20; 200**
3. **2; 20; 200**
4. **2; 20; 200**

(B) 1. $2\overline{)28}$ → **14**
6. $4\overline{)84}$ → **21**

2. $2\overline{)36}$ → **12**
7. $2\overline{)62}$ → **31**

3. $6\overline{)66}$ → **11**
8. $3\overline{)96}$ → **32**

4. $2\overline{)46}$ → **23**
9. $8\overline{)88}$ → **11**

5. $3\overline{)69}$ → **23**
10. $2\overline{)84}$ → **42**

(C) 1. $2\overline{)202}$ → **101**
3. $2\overline{)864}$ → **432**

2. $2\overline{)440}$ → **220**
4. $3\overline{)639}$ → **213**

5. $4\overline{)488}$ = 122

(D)

$2\overline{)22}$ = 11	$3\overline{)39}$ = 13	$2\overline{)20}$ = 10	$2\overline{)48}$ = 24	$4\overline{)48}$ = 12	$2\overline{)64}$ = 32		
M	U	S	H	R	O	O	M
13	32	24	12	11	10	10	13

Divide numbers by regrouping hundreds, tens and ones

(A) 1. **18** $5\overline{)90}$

2. **28** $3\overline{)84}$

3. **18** $2\overline{)36}$

4. **19** $4\overline{)76}$

5. **16** $6\overline{)96}$

6. **14** $7\overline{)98}$

7. **24** $3\overline{)72}$

8. **15** $5\overline{)75}$

9. **47** $2\overline{)94}$

10. **17** $4\overline{)68}$

(B) 1. **99** $8\overline{)792}$

2. **91** $7\overline{)637}$

3. **23** $6\overline{)138}$

4. **234** $3\overline{)702}$

5. **108** $9\overline{)972}$

(C)

$2\overline{)52}$ = 26	$3\overline{)54}$ = 18	$4\overline{)96}$ = 24	$5\overline{)85}$ = 17	$6\overline{)84}$ = 14	$7\overline{)91}$ = 13		
K	A	N	G	A	R	O	O
14	24	26	13	24	17	18	18

(D) 1. (a) **914**
(b) **457** $2\overline{)914}$

2. (a) **261**
(b) **87** $3\overline{)261}$

3. (a) **875**
(b) **218 R 3** $4\overline{)875}$

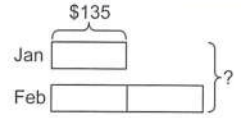
4. (a) **396**
(b) **79 R 1** $5\overline{)396}$

5. (a) **714**
(b) **119** $6\overline{)714}$

Unit 8: Two-Step Word Problems on the Four Operations

Solve two-step word problems related to addition, subtraction, multiplication and division

1.



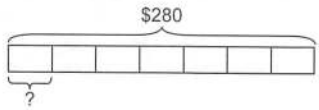
$135 × 2 = $270

She saved $270 in February.

$135 + $270 = $405

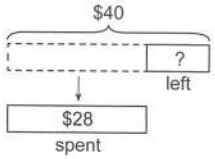
Samantha saved **$405** in the two months.

2.



$280 ÷ 7 = $40

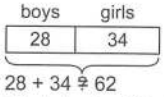
He has $40 to spend on Monday.



$40 – $28 = $12

He has **$12** left on that day.

3. (a)



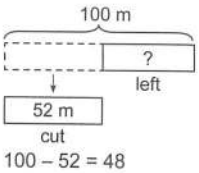
28 + 34 = 62

62 students visited the library.

(b) 62 × 4 = 248

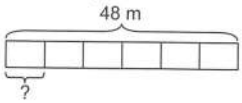
They borrowed **248** books altogether.

4.



100 – 52 = 48

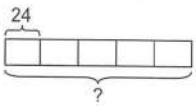
48 m of rope remains.



48 ÷ 6 = 8

The length of each piece of rope is **8 m**.

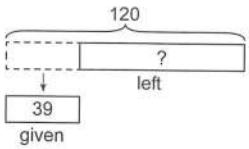
5. (a)



24 × 5 = 120

There are **120** pencils altogether.

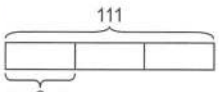
(b)



120 – 39 = 81

81 pencils are left.

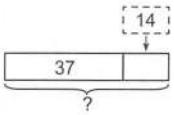
6. (a)



111 ÷ 3 = 37

Each boy gets **37** marbles.

(b)

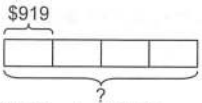


37 + 14 = 51

He has **51** marbles now.

7. $968 – $49 = $919

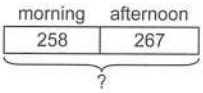
The discounted price of each laptop computer is $919.



$919 × 4 = $3676

He has to pay **$3676** in all.

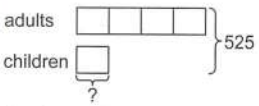
8. (a)



258 + 267 = 525

525 people visited the exhibition altogether in the day.

(b)

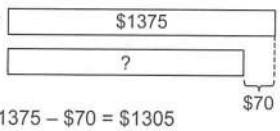


5 units → 525

1 unit → 525 ÷ 5 = 105

There were **105** children.

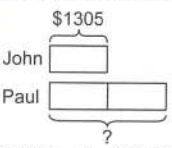
9.



(a) $1375 – $70 = $1305

John earns **$1305**.

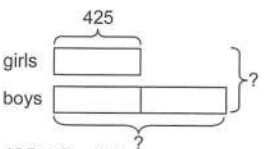
(b)



$1305 × 2 = $2610

Paul earns **$2610**.

10.



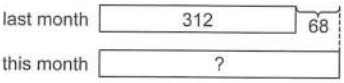
(a) 425 × 2 = 850

There are **850** boys.

(b) 425 + 850 = 1275

There are **1275** students altogether.

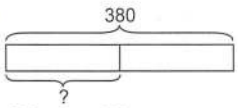
11. (a)



312 + 68 = 380

Jason collected **380** stamps this month.

(b)

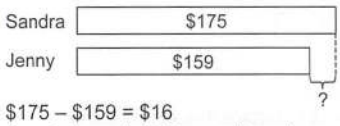


$380 \div 2 = 190$

Each friend would get **190** stamps.

$$2\overline{)380}\quad 190,\ 2,\ 18,\ 18,\ 0,\ 0,\ 0$$

12. (a)

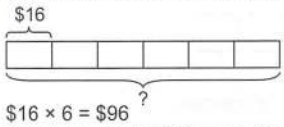


$\$175 - \$159 = \$16$

Sandra spends **$16** more than Jenny on food.

$$\begin{array}{r} {}^{6}1\,{}^{15}\not{7}\,\not{5} \\ -\ 1\ 5\ 9 \\ \hline 1\ 6 \end{array}$$

(b)

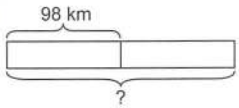


$\$16 \times 6 = \$96$

Sandra spends **$96** more than Jenny on food in 6 months.

$$\begin{array}{r} {}^{3}1\ 6 \\ \times\ \ 6 \\ \hline 9\ 6 \end{array}$$

13. (a)

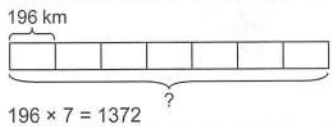


$98 \times 2 = 196$

Johnson travels **196 km** to and fro the city.

$$\begin{array}{r} {}^{1}9\ 8 \\ \times\ \ 2 \\ \hline 1\ 9\ 6 \end{array}$$

(b)

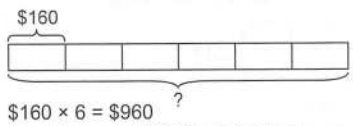


$196 \times 7 = 1372$

He will travel **1372 km** in all.

$$\begin{array}{r} {}^{6}{}^{4}1\ 9\ 6 \\ \times\ \ \ \ 7 \\ \hline 1\,3\,7\,2 \end{array}$$

14. (a)

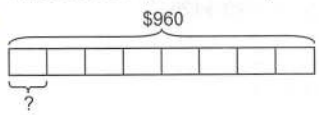


$\$160 \times 6 = \$960$

Emelda saved **$960** in half a year.

$$\begin{array}{r} {}^{3}1\ 6\ 0 \\ \times\ \ \ 6 \\ \hline 9\ 6\ 0 \end{array}$$

(b)

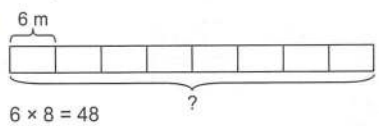


$\$960 \div 8 = \$120$

She paid **$120** for each present.

$$8\overline{)960}\quad 120,\ 8,\ 16,\ 16,\ 0,\ 0,\ 0$$

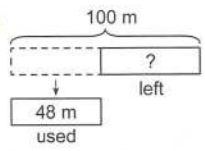
15. (a)



$6 \times 8 = 48$

She uses **48 m** of cloth for the 8 dresses.

(b)

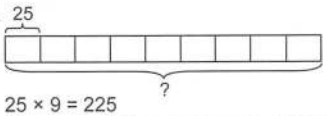


$100 - 48 = 52$

She has **52 m** of cloth left.

$$\begin{array}{r} {}^{0}{}^{9}{}^{10}\not{1}\,\not{0}\,\not{0} \\ -\ 4\ 8 \\ \hline 5\ 2 \end{array}$$

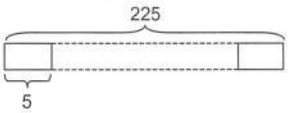
16.



$25 \times 9 = 225$

There were 225 candy canes altogether.

$$\begin{array}{r} {}^{4}2\ 5 \\ \times\ \ 9 \\ \hline 2\ 2\ 5 \end{array}$$

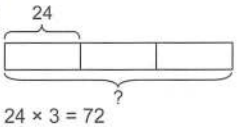


$225 \div 5 = 45$

She had **45** students.

$$5\overline{)225}\quad 45,\ 20,\ 25,\ 25,\ 0$$

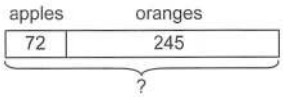
17.



$24 \times 3 = 72$

There were 72 apples altogether.

$$\begin{array}{r} {}^{1}2\ 4 \\ \times\ \ 3 \\ \hline 7\ 2 \end{array}$$

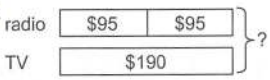


$72 + 245 = 317$

She bought **317** fruit altogether.

$$\begin{array}{r} {}^{1}2\,4\,5 \\ +\ \ 7\ 2 \\ \hline 3\ 1\ 7 \end{array}$$

18.



$\$95 \times 2 = \$190$

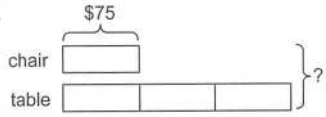
$\$190 + \$190 = \$380$

He needs to pay **$380** in total.

$$\begin{array}{r} {}^{1}9\ 5 \\ \times\ \ 2 \\ \hline 1\ 9\ 0 \end{array}$$

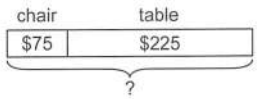
$$\begin{array}{r} {}^{1}1\ 9\ 0 \\ +\ 1\ 9\ 0 \\ \hline 3\ 8\ 0 \end{array}$$

19.



$\$75 \times 3 = \$225$

The table cost $225.



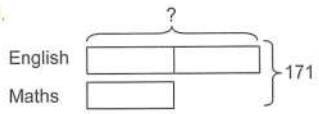
$\$75 + \$225 = \$300$

Jack paid **$300** for the furniture.

$$\begin{array}{r} {}^{1}7\ 5 \\ \times\ \ 3 \\ \hline 2\ 2\ 5 \end{array}$$

$$\begin{array}{r} {}^{1}\ {}^{1}7\ 5 \\ +\ 2\ 2\ 5 \\ \hline 3\ 0\ 0 \end{array}$$

20.



3 units → 171

1 unit → $171 \div 3 = 57$

She scored 57 marks for Mathematics.

$57 \times 2 = 114$

She scored **114** marks for English.

$$3\overline{)171}\quad 57,\ 15,\ 21,\ 21,\ 0$$

$$\begin{array}{r} {}^{1}5\ 7 \\ \times\ \ 2 \\ \hline 1\ 1\ 4 \end{array}$$

Review 4 (Questions available online.)

1. $7\overline{)537}$ — 76, 49, 47, 42, 5

76; 5

2. $9\overline{)908}$ — 100, 9, 0, 0, 8, 0, 8

100; 8

3. $6\overline{)612}$: 6 → 1; 0 → 12; 12 → 0. **102**

5. $5\overline{)825}$: 5 → 32; 30 → 25; 25 → 0. **165**

4. $4\overline{)504}$: 4 → 10; 8 → 24; 24 → 0. **126**

6. $8\overline{)776}$: 72 → 56; 56 → 0. **97**

7. **2358**
8. **9843**
9. **1457**
10. **9630**

11.

51	318	119	206	135	79
$7\overline{)357}$	$3\overline{)954}$	$6\overline{)714}$	$4\overline{)824}$	$5\overline{)675}$	$9\overline{)711}$
35	9	6	8	5	63
7	5	11	2	17	81
7	3	6	0	15	81
0	24	54	24	25	0
	24	54	24	25	
	0	0	0	0	

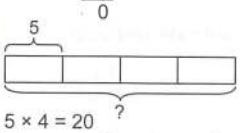
L	I	B	R	A	R	Y
79	51	318	206	135	206	119

12. **139** $2\overline{)278}$: 2 → 7; 6 → 18; 18 → 0.

13. **50** $8\overline{)400}$: 40 → 0; 0 → 0.

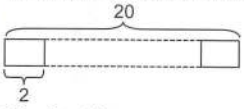
14. **234** $3\overline{)702}$: 6 → 10; 9 → 12; 12 → 0.

15. (a)



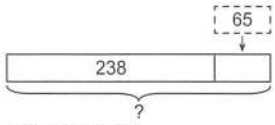
$5 \times 4 = 20$
There are **20** packets of noodles altogether.

(b)



$20 \div 2 = 10$
She gives to **10** friends.

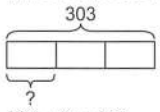
16. (a)



$238 + 65 = 303$
Marcus has **303** marbles now.

$$\begin{array}{r} {\scriptstyle 1\ 1\ \ } \\ 2\ 3\ 8 \\ +\ \ 6\ 5 \\ \hline 3\ 0\ 3 \end{array}$$

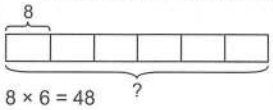
(b)



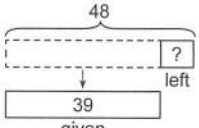
$303 \div 3 = 101$
There are **101** marbles in each container.

$3\overline{)303}$: 3 → 0; 3 → 3; 3 → 0. **101**

17.



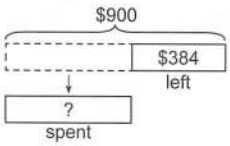
$8 \times 6 = 48$
There are 48 pencils altogether.



$48 - 39 = 9$
She has **9** pencils left.

$$\begin{array}{r} {\scriptstyle 3\ 18\ \ } \\ 4\ \not{8} \\ -\ 3\ 9 \\ \hline 9 \end{array}$$

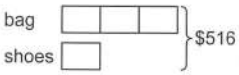
18. (a)



$\$900 - \$384 = \$516$
Madeline spends **$516** on shopping.

$$\begin{array}{r} {\scriptstyle 8\ 9\ 10\ \ } \\ \not{9}\ \not{0}\ 0 \\ -\ 3\ 8\ 4 \\ \hline 5\ 1\ 6 \end{array}$$

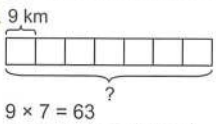
(b)



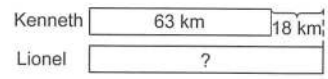
4 units → $516
1 unit → $516 ÷ 4 = $129
The pair of shoes costs **$129**.

$4\overline{)516}$: 4 → 11; 8 → 36; 36 → 0. **129**

19.



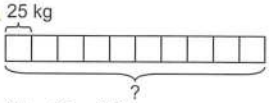
$9 \times 7 = 63$
Kenneth jogs **63 km** in a week.



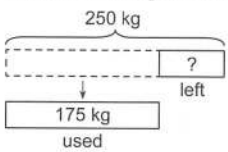
$63 + 18 = 81$
Lionel jogs **81 km** in a week.

$$\begin{array}{r} {\scriptstyle 1\ \ } \\ 6\ 3 \\ +\ 1\ 8 \\ \hline 8\ 1 \end{array}$$

20. 25 kg



$25 \times 10 = 250$
The cement weights 250 kg in all.



$250 - 175 = 75$
75 kg of cement is left.

$$\begin{array}{r} {\scriptstyle 1\ 14\ 10\ \ } \\ 2\ \not{5}\ \not{0} \\ -\ 1\ 7\ 5 \\ \hline 7\ 5 \end{array}$$

(Questions available online.
Revision Test 1 Also available on Geniebook.)

1. **7300**
2. **4040**
3. **five thousand and fifteen**
4. **six thousand, four hundred and eleven**

5.
$$\begin{array}{r} {\scriptstyle 1}\quad {\scriptstyle 1} \\ 3618 \\ +\,2934 \\ \hline 6552 \end{array}$$

6.
$$\begin{array}{r} {\scriptstyle 3}\quad {\scriptstyle 13}\quad {\scriptstyle 6}\quad {\scriptstyle 12} \\ 4\,\not{3}\,\not{7}\,\not{2} \\ -\,2465 \\ \hline 1907 \end{array}$$

7.
$$\begin{array}{r} {\scriptstyle 3}\quad {\scriptstyle 6} \\ 149 \\ \times\quad 7 \\ \hline 1043 \end{array}$$

8. **7**
$$8\overline{)863}\quad 107$$
8
6
0
63
56
7

9. **125**
$$6\overline{)750}\quad 125$$
6
15
12
30
30
0

10.
$$\begin{array}{r} {\scriptstyle 1}\quad {\scriptstyle 1} \\ 3891 \\ +\,4623 \\ \hline 8514 \end{array}$$

11.
$$\begin{array}{r} {\scriptstyle 8}\quad {\scriptstyle 9}\quad {\scriptstyle 9}\quad {\scriptstyle 10} \\ 9\,\not{0}\,\not{0}\,\not{0} \\ -\,4515 \\ \hline 4485 \end{array}$$

12.
$$7\overline{)800}\quad 114$$
7
10
7
30
28
2

13.
$$\begin{array}{r} {\scriptstyle 7}\quad {\scriptstyle 11}\quad {\scriptstyle 12}\quad {\scriptstyle 10} \\ 8\,\not{2}\,\not{3}\,\not{0} \\ -\,1965 \\ \hline 6265 \end{array}$$

14.
$$\begin{array}{r} {\scriptstyle 1}\quad {\scriptstyle 3} \\ 414 \\ \times\quad 8 \\ \hline 3312 \end{array}$$

15.
$$4\overline{)312}\quad 78$$
28
32
32
0

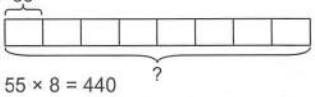
16. **2436, 4263, 6302, 8143**
17. **greater**

18. **6 × 7 = 42** **42 ÷ 6 = 7**
7 × 6 = 42 **42 ÷ 7 = 6**

19. + 100 + 100 + 100 + 100
2017, **2117**, **2217**, 2317, 2417

20. **8**; **3**; **24**

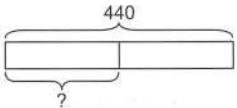
21. 55



$$\begin{array}{r} {\scriptstyle 4} \\ 55 \\ \times\quad 8 \\ \hline 440 \end{array}$$

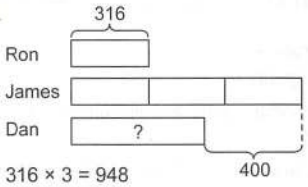
$$2\overline{)440}\quad 220$$
4
4
4
0
0
0

55 × 8 = 440
There are 440 chocolate bars altogether.



440 ÷ 2 = 220
There are **220** chocolate bars in each bag.

22.



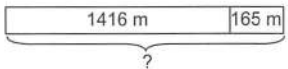
$$\begin{array}{r} \quad {\scriptstyle 1} \\ 316 \\ \times\quad 3 \\ \hline 948 \end{array}$$

316 × 3 = 948
James has 948 bottle caps.
948 – 400 = 548

$$\begin{array}{r} 948 \\ -\,400 \\ \hline 548 \end{array}$$

Dan has **548** bottle caps.

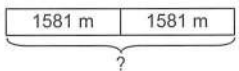
23. (a)



$$\begin{array}{r} \quad {\scriptstyle 1}\quad {\scriptstyle 1} \\ 1416 \\ +\,165 \\ \hline 1581 \end{array}$$

1416 + 165 = 1581
The shop is **1581 m** from her house.

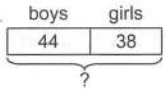
(b)



$$\begin{array}{r} {\scriptstyle 1}\quad {\scriptstyle 1} \\ 1581 \\ \times\quad 2 \\ \hline 3162 \end{array}$$

1581 × 2 = 3162
She walks **3162 m**.

24.



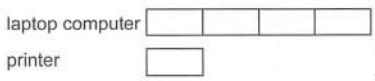
$$\begin{array}{r} \quad {\scriptstyle 1} \\ 44 \\ +\,38 \\ \hline 82 \end{array}$$

44 + 38 = 82
There are 82 children.

82 × 3 = 246
246 cupcakes are given out altogether.

$$\begin{array}{r} 82 \\ \times\quad 3 \\ \hline 246 \end{array}$$

25. (a)



5 units → $1495
1 unit → $1495 ÷ 5 = $299
The printer costs **$299**.

$$5\overline{)1495}\quad 299$$
10
49
45
45
45
0

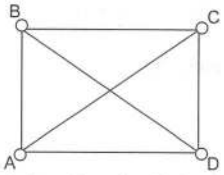
(b) $299 × 4 = $1196
The laptop computer costs **$1196**.

$$\begin{array}{r} {\scriptstyle 3}\quad {\scriptstyle 3} \\ 299 \\ \times\quad 4 \\ \hline 1196 \end{array}$$

Non-Routine Questions 1 (Questions available online.)

1. $6 + $12 + $18 + $24 + $30 + $36 + $42 = $168
   He will have **$168** by Sunday.

2. Starting from the third term, the result of each term is obtained by adding its two preceding numbers.
   47 + 29 = **76**
   76 + 47 = **123**
   123 + 76 = **199**

3. 

   A shook hands with B, C and D. (3 handshakes)
   B shook hands with C and D. (2 handshakes, with B-A already counted)
   C shook hands with D. (1 handshake, with C-A and C-B already counted)
   3 + 2 + 1 = 6 handshakes
   4 people were at the gathering.

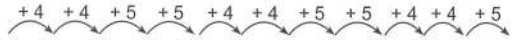
4. The possible combinations of the 2-digit numbers are 12, 13, 21, 23, 31 and 32.
   The 2-digit numbers that can be divided by 4 are **12** and **32**.

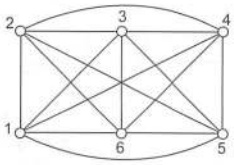
5. Let the digits be A, B, C and D.

A	B	C	D
	smallest	biggest	

   (C + D) – (A + B) = 8
   A + B + C + D = 26
   Use 'Guess and Check' method.
   C + D = 9 + 8 = 17
   A + B = 5 + 4 = 9
   17 – 9 = 8
   5 + 4 + 9 + 8 = 26
   Number X is **5498**.

6. When divided by 5, the number could be 22, 27, (32) and 37.
   When divided by 6, the number could be 26, (32) and 38.
   32 ÷ 5 = 6 R 2
   32 ÷ 6 = 5 R 2
   I am **32**.

7. 

8. 

   1st person exchanged handshakes with 5 other people.
   2nd person exchanged handshakes with 4 other people, with 2-1 already counted.
   3rd person exchanged handshakes with 3 other people, with 3-1 and 3-2 already counted.
   4th person exchanged handshakes with 2 other people, with 4-1, 4-2 and 4-3 already counted.
   5th person exchanged handshakes with 1 other person, with 5-1, 5-2, 5-3 and 5-4 already counted.
   5 + 4 + 3 + 2 + 1 = 15
   15 handshakes were exchanged.

9. When shared by 3 boys, the number of lollipops could be 4, 7, 10, (13), 16 and 19.
   When shared by 4 boys, the number of lollipops could be 5, 9, (13) and 17.
   13 ÷ 3 = 4 R 1
   13 ÷ 4 = 3 R 1
   There are **13** lollipops in the pack.

10. A = C
    B – A = 1
    A + B + C = 4
    Using 'Guess and Check' method.
    2 – 1 = 1
    1 + 2 + 1 = 4
    This mystery 3-digit odd number is **121**.

11. 44 – 32 = 12
    56 – 44 = 12
    68 – 56 = 12
    68 + 12 = 80
    10 workers need **80** days to build the same building.

12. 3 × 7 = 21
    21 × 5 = 105
    The sum of the facing page numbers is 105.
    52 + 53 = 105
    The facing page numbers are **52** and **53**.

Unit 9: Money

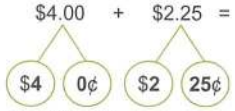
Add money in dollars and cents

(A)
1. **0.15**
2. **1.05**
3. **4.00**
4. **9.50**
5. **8.25**
6. **0.70**
7. **2.20**
8. **3.45**
9. **5.05**
10. **6.10**

(B)
1. **290**
2. **115**
3. **405**
4. **30**
5. **5**
6. **800**
7. **765**
8. **320**
9. **550**
10. **605**

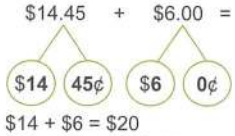
(C)
1. **75**
2. **50**
3. **85**
4. **10**
5. **35**
6. **0.70**
7. **0.55**
8. **0.95**
9. **0.40**
10. **0.25**

(D)
1. $4.00 + $2.25 = **$6.25**



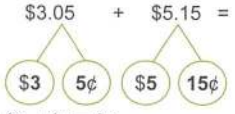
   $4 + $2 = $6
   $6 + 25¢ = $6.25

2. $14.45 + $6.00 = **$20.45**



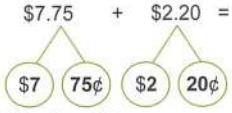
   $14 + $6 = $20
   $20 + 45¢ = $20.45

3. $3.05 + $5.15 = **$8.20**



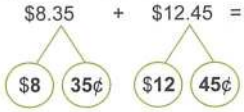
   $3 + $5 = $8
   5¢ + 15¢ = 20¢
   $8 + 20¢ = $8.20

4. $7.75 + $2.20 = **$9.95**



$7 + $2 = $9
75¢ + 20¢ = 95¢
$9 + 95¢ = $9.95

5. $8.35 + $12.45 = **$20.80**



$8 + $12 = $20
35¢ + 45¢ = 80¢
$20 + 80¢ = $20.80

(E) 1. **16.95**
$6 + $10 = $16
$16 + 95¢ = $16.95

2. **51.20**
$43 + $8 = $51
$51 + 20¢ = $51.20

3. **104.75**
$14 + $90 = $104
$104 + 75¢ = $104.75

4. **98.90**
$30 + $68 = $98
$98 + 90¢ = $98.90

5. **9.60**
5¢ + 55¢ = 60¢
$9 + 60¢ = $9.60

6. **24.90**
$24 + 90¢ = $24.90

7. **70.80**
$70 + 80¢ = $70.80

8. **89.20**
20¢ + $6.80 = $7
$82.20 + $7 = $89.20

9. **55.85**
$53 + $2 = $55
60¢ + 25¢ = 85¢
$55 + 85¢ = $55.85

10. **45.30**
20¢ + $1.80 = $2
$43.30 + $2 = $45.30

(F) 1. $9.90 + $0.50 = **$10.40**

50¢ + 50¢ = $1
$9.40 + $1 = $10.40

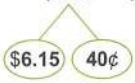
2. $7.45 + $0.95 = **$8.40**

95¢ + 5¢ = $1
$7.40 + $1 = $8.40

3. $5.80 + $2.75 = **$8.55**

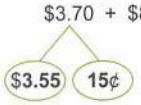
$2.75 + 25¢ = $3
$5.55 + $3 = $8.55

4. $6.55 + $4.60 = **$11.15**



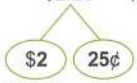
$4.60 + 40¢ = $5
$6.15 + $5 = $11.15

5. $3.70 + $8.85 = **$12.55**



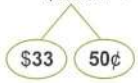
$8.85 + 15¢ = $9
$3.55 + $9 = $12.55

6. $2.25 + $12.75 = **$15**



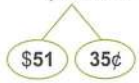
$12.75 + 25¢ = $13
$2 + $13 = $15

7. $33.50 + $44.50 = **$78**



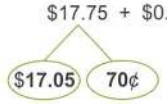
$44.50 + 50¢ = $45
$33 + $45 = $78

8. $51.35 + $29.65 = **$81**



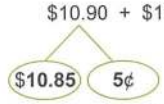
$29.65 + 35¢ = $30
$51 + $30 = $81

9. $17.75 + $0.30 = **$18.05**



30¢ + 70¢ = $1
$17.05 + $1 = $18.05

10. $10.90 + $11.95 = **$22.85**



$11.95 + 5¢ = $12
$10.85 + $12 = $22.85

(G) 1.
$$\begin{array}{r} \$\ 86.75 \\ +\$\ 37.45 \\ \hline \$124.20 \end{array}$$

2.
$$\begin{array}{r} \$515.55 \\ +\$\ 79.25 \\ \hline \$594.80 \end{array}$$

3.
$$\begin{array}{r} \$4.35 \\ +\$0.90 \\ \hline \$5.25 \end{array}$$

4.
$$\begin{array}{r} \$73.20 \\ +\$18.00 \\ \hline \$91.20 \end{array}$$

5.
$$\begin{array}{r} \$125.80 \\ +\$214.40 \\ \hline \$340.20 \end{array}$$

6.
$$\begin{array}{r} \$217.00 \\ +\$142.85 \\ \hline \$359.85 \end{array}$$

7.
$$\begin{array}{r} \$\ 56.20 \\ +\$\ 64.15 \\ \hline \$120.35 \end{array}$$

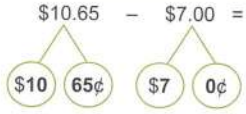
8.
$$\begin{array}{r} \$49.70 \\ +\$28.50 \\ \hline \$78.20 \end{array}$$

9.
$$\begin{array}{r} \$67.90 \\ +\$17.70 \\ \hline \$85.60 \end{array}$$

10.
$$\begin{array}{r} \$378.65 \\ +\$492.35 \\ \hline \$871.00 \end{array}$$

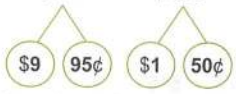
Subtract money in dollars and cents

(A) 1. $10.65 – $7.00 = **$3.65**



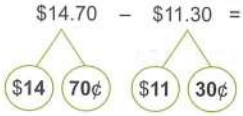
$10 – $7 = $3
$3 + 65¢ = $3.65

2. $9.95 – $1.50 = **$8.45**



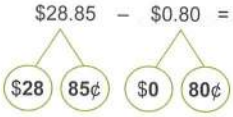
$9 – $1 = $8
95¢ – 50¢ = 45¢
$8 + 45¢ = $8.45

3. $14.70 – $11.30 = **$3.40**



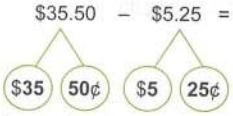
$14 – $11 = $3
70¢ – 30¢ = 40¢
$3 + 40¢ = $3.40

4. $28.85 – $0.80 = **$28.05**



85¢ – 80¢ = 5¢
$28 + 5¢ = $28.05

5. $35.50 – $5.25 = **$30.25**



$35 – $5 = $30
50¢ – 25¢ = 25¢
$30 + 25¢ = $30.25

(B) 1. **25.10**
90¢ – 80¢ = 10¢
$25 + 10¢ = $25.10

2. **74.55**
$78 – $4 = $74
$74 + 55¢ = $74.55

3. **36.10**
70¢ – 60¢ = 10¢
$36 + 10¢ = $36.10

4. **82.55**
75¢ – 20¢ = 55¢
$82 + 55¢ = $82.55

5. **48.15**
60¢ – 45¢ = 15¢
$48 + 15¢ = $48.15

6. **99.15**
50¢ – 35¢ = 15¢
$99 + 15¢ = $99.15

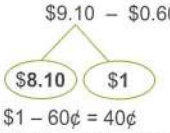
7. **83.20**
$87 – $4 = $83
30¢ – 10¢ = 20¢
$83 + 20¢ = $83.20

8. **66.20**
$69 – $3 = $66
55¢ – 35¢ = 20¢
$66 + 20¢ = $66.20

9. **91.30**
$92 – $1 = $91
60¢ – 30¢ = 30¢
$91 + 30¢ = $91.30

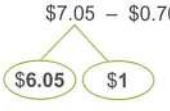
10. **51.30**
$58 – $7 = $51
80¢ – 50¢ = 30¢
$51 + 30¢ = $51.30

(C) 1. $9.10 – $0.60 = **$8.50**



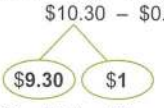
$1 – 60¢ = 40¢
$8.10 + 40¢ = $8.50

2. $7.05 – $0.70 = **$6.35**



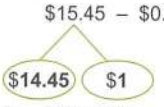
$1 – 70¢ = 30¢
$6.05 + 30¢ = $6.35

3. $10.30 – $0.55 = **$9.75**



$1 – 55¢ = 45¢
$9.30 + 45¢ = $9.75

4. $15.45 – $0.90 = **$14.55**

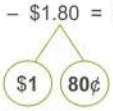


$1 – 90¢ = 10¢
$14.45 + 10¢ = $14.55

5. $8.25 – $0.65 = **$7.60**

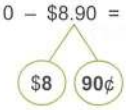
$1 – 65¢ = 35¢
$7.25 + 35¢ = $7.60

(D) 1. $11.50 – $1.80 = **$9.70**



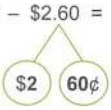
$11.50 – $1 = $10.50
$10.50 – 80¢ = $9.70

2. $39.10 – $8.90 = **$30.20**



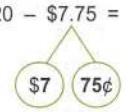
$39.10 – $8 = $31.10
$31.10 – 90¢ = $30.20

3. $6.55 – $2.60 = **$3.95**



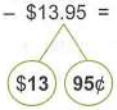
$6.55 – $2 = $4.55
$4.55 – 60¢ = $3.95

4. $25.20 – $7.75 = **$17.45**



$25.20 – $7 = $18.20
$18.20 – 75¢ = $17.45

5. $18.35 – $13.95 = **$4.40**



$18.35 – $13 = $5.35
$5.35 – 95¢ = $4.40

(E) 1.
$$\begin{array}{r} \$\,5\,{}^{4}0\,{}^{9}.\,0\,{}^{10}0 \\ -\$\quad 5.60 \\ \hline \$44.40 \end{array}$$

2.
$$\begin{array}{r} \$\,2\,8\,{}^{7}0\,{}^{9}.\,5\,{}^{15}0 \\ -\$\quad 66.60 \\ \hline \$213.90 \end{array}$$

3.
$$\begin{array}{r} \$\,2\,{}^{2}3\,{}^{11}.\,1\,0 \\ -\$\quad 2.30 \\ \hline \$20.80 \end{array}$$

4.
$$\begin{array}{r} \$\,7\,{}^{4}5\,{}^{18}8.\,7\,0 \\ -\$\,329.40 \\ \hline \$429.30 \end{array}$$

5.
$$\begin{array}{r} \$\,1\,4\,{}^{2}3.\,0\,{}^{10}5 \\ -\$\quad 21.80 \\ \hline \$121.25 \end{array}$$

6.
$$\begin{array}{r} \$\,{}^{8}9\,{}^{14}5\,{}^{15}5.\,6\,{}^{5}0\,{}^{10}0 \\ -\$\quad 89.45 \\ \hline \$866.15 \end{array}$$

7.
$$\begin{array}{r} \$\,4\,{}^{8}9.\,2\,{}^{12}5 \\ -\$\quad 5.60 \\ \hline \$43.65 \end{array}$$

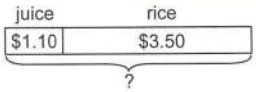
8.
$$\begin{array}{r} \$\,{}^{0}1\,{}^{9}0.\,0\,{}^{9}0\,{}^{10}0 \\ -\$\quad 3.45 \\ \hline \$\quad 6.55 \end{array}$$

9.
$$\begin{array}{r} \$\,6\,{}^{5}5\,{}^{15}9.\,2\,{}^{8}0\,{}^{11}0 \\ -\$\quad 92.25 \\ \hline \$566.95 \end{array}$$

10.
$$\begin{array}{r} \$\,5\,{}^{4}1\,{}^{10}2.\,3\,{}^{11}0\,{}^{12}0 \\ -\$467.85 \\ \hline \$\quad 44.45 \end{array}$$

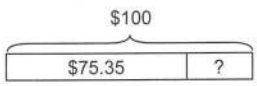
Solve word problems related to money

1.



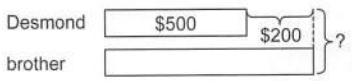
$1.10 + $3.50 = $4.60
Ashley pays **$4.60** altogether.

2.



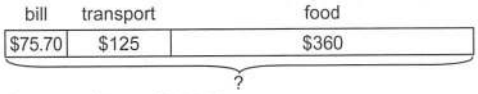
$100 – $75.35 = $24.65
She would receive **$24.65** in change.

3.



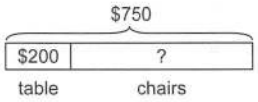
$500 + $200 = $700
$500 + $700 = $1200
His parents received **$1200** altogether.

4.



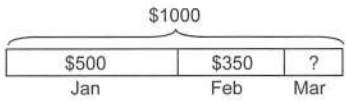
$75.70 + $125 = $200.70
$200.70 + $360.00 = $560.70
She spends **$560.70** altogether every month.

5.



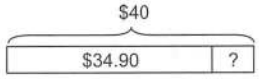
$750 – $200 = $550
The chairs cost **$550**.

6.



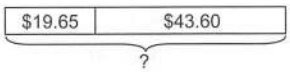
$500 + $350 = $850
$1000 – $850 = $150
Beth had to save **$150** in March.

7.



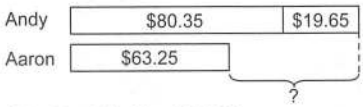
4 × $10.00 = $40.00
$40.00 – $34.90 = $5.10
She would receive **$5.10** in change.

8. (a)



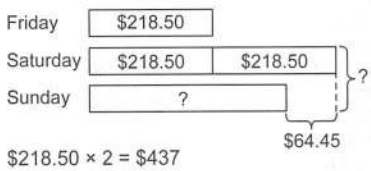
$19.65 + $43.60 = $63.25
Aaron had **$63.25** at first.

(b)



$80.35 + $19.65 = $100.00
$100.00 – $63.25 = $36.75
Andy had **$36.75** more than Aaron.

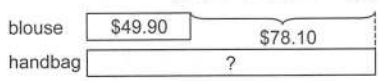
9. (a)



$218.50 × 2 = $437
$437 – $64.45 = $372.55
The bakery collected **$372.55** on Sunday.

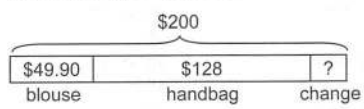
(b) $218.50 + $437 = $655.50
$655.50 + $372.55 = $1028.05
The bakery collected **$1028.05** in the three days.

10. (a)



$49.90 + $78.10 = $128
The handbag costs **$128**.

(b)



$49.90 + $128 = $177.90
$200 – 177.90 = $22.10
She will receive **$22.10** in change.

Unit 10: Length, Mass and Volume

Express length in kilometres, metres or centimetres

(A) 1. 100, 10
110
2. 500, 5
505
3. 600, 56
656
4. 200, 92
292
5. 800, 8
808
6. 400, 3
403
7. 700, 89
789
8. 300, 40
340
9. 900, 45
945
10. 500, 11
511

(B) 1. 100, 1
1, 1
2. 700, 10
7, 10
3. 800, 5
8, 5
4. 900, 78
9, 78
5. 300, 90
3, 90
6. 500, 21
5, 21
7. 600, 6
6, 6
8. 700, 59
7, 59
9. 400, 32
4, 32
10. 200, 12
2, 12

(C) 1. 1000, 70
1070
2. 6000, 0
6000
3. 9000, 220
9220
4. 5000, 500
5500
5. 7000, 3
7003
6. 9000, 90
9090
7. 3000, 456
3456
8. 2000, 323
2323
9. 1000, 309
1309
10. 8000, 888
8888

(D) 1. 6000, 830
6, 830
2. 1000, 0
1, 0
3. 6000, 592
6, 592
4. 9000, 225
9, 225
5. 4000, 50
4, 50
6. 8000, 3
8, 3
7. 2000, 6
2, 6
8. 3000, 100
3, 100
9. 7000, 707
7, 707
10. 5000, 55
5, 55

(E) 1. 2700; 2, 700
2. 2350; 2, 350
3. 1500; 1, 500
4. 1070; 1, 70
5. 1000; 1, 0

Read the correct mass on scales

1. 5, 100
2. 1, 800
3. 2, 500
4. 4, 300
5. 2, 600
6. 3, 900

Express mass in kilograms and grams

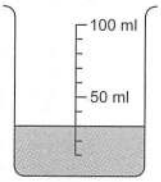
(A) 1. 1000, 238
1238
2. 3000, 300
3300
3. 9000, 569
9569
4. 5000, 955
5955
5. 7000, 67
7067
6. 6000, 60
6060
7. 4000, 8
4008
8. 8000, 642
8642
9. 2000, 484
2484
10. 3000, 102
3102

(B) 1. 4000, 820
4, 820
2. 7000, 997
7, 997
3. 6000, 606
6, 606
4. 8000, 9
8, 9
5. 3000, 33
3, 33
6. 5000, 115
5, 115
7. 8000, 780
8, 780
8. 2000, 200
2, 200
9. 9000, 90
9, 90
10. 1000, 1
1, 1

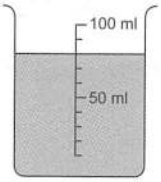
Read and draw the correct volume in measuring beakers

(A) 1. **300**
2. **750**
500 ml + 250 ml = 750 ml
3. **1, 300**
1 *l* + 300 ml = 1 *l* 300 ml
4. **2, 70**
1 *l* + 1 *l* + 70 ml = 2 *l* 70 ml
5. **350**
100 ml + 100 ml + 150 ml = 350 ml
6. **1, 590**
1 *l* + 500 ml + 90 ml = 1 *l* 590 ml

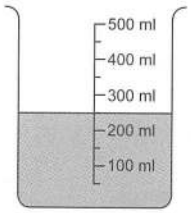
(B) 1.



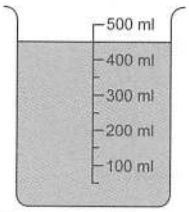
2.



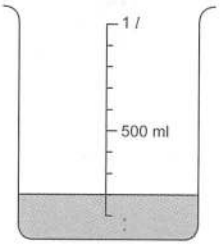
3.



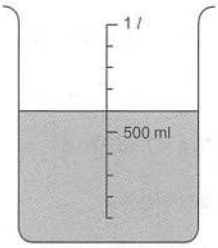
4.



5.



6.



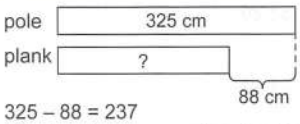
Express volume in litres and millilitres

(A)
1. 4000, 368
   4368
2. 1000, 11
   1011
3. 8000, 818
   8818
4. 2000, 202
   2202
5. 3000, 8
   3008
6. 8000, 96
   8096
7. 7000, 478
   7478
8. 9000, 9
   9009
9. 5000, 555
   5555
10. 6000, 330
    6330

(B)
1. 9000, 909
   9, 909
2. 3000, 100
   3, 100
3. 8000, 702
   8, 702
4. 2000, 0
   2, 0
5. 5000, 15
   5, 15
6. 7000, 7
   7, 7
7. 6000, 60
   6, 60
8. 4000, 44
   4, 44
9. 1000, 100
   1, 100
10. 9000, 898
    9, 898

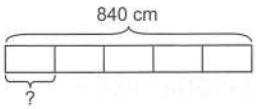
Solve word problems related to length, mass and volume

1.



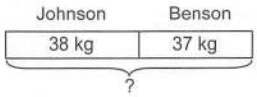
325 – 88 = 237
The length of the wooden plank is **237 cm**.

2.



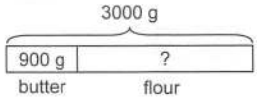
840 ÷ 5 = 168
The length of each piece of ribbon is **168 cm**.

3.



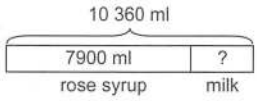
38 + 37 = 75
Their total mass is **75 kg**.

4.



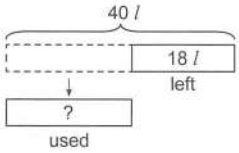
3000 – 900 = 2100
2100 g = 2000 g + 100 g = 2 kg 100 g
She used **2 kg 100 g** of flour.

5.



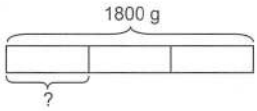
10 360 – 7900 = 2460
She adds **2460 ml** of milk.

6.



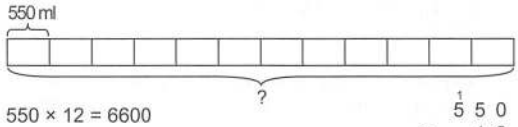
40 – 18 = 22
She has used up **22 l** of petrol.

7.



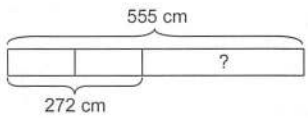
1800 ÷ 3 = 600
The mass of each bag of biscuits was **600 g**.

8.



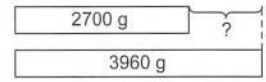
550 × 12 = 6600
6600 ml = 6000 ml + 600 ml
= 6 l 600 ml
She bought **6 l 600 ml** of orange juice.

9.



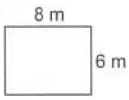
555 – 272 = 283
283 cm = 200 cm + 83 cm = 2 m 83 cm
The length of the third stick is **2 m 83 cm**.

10.

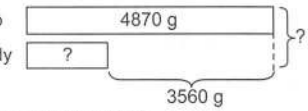


3960 – 2700 = 1260
The table is **1260 g** heavier than the chair.

11. 8 + 6 + 8 + 6 = 28
The fence will be **28 m** long.

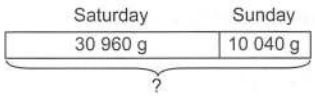


12.



4870 – 3560 = 1310
Andy's sack of goods weighs 1310 g.
4870 + 1310 = 6180
6180 g = 6000 g + 180 g = 6 kg 180 g
The two sacks of goods weigh **6 kg 180 g**.

13.



30 960 + 10 040 = 41 000
41 000 g = 41 kg
He sold **41 kg** of fish on both days.

14. Stanley 8300 ml
Edward ? 6970 ml

$$\begin{array}{r} {}^{7}\cancel{8}\,{}^{12}\cancel{3}\,{}^{10}\cancel{0}\,0 \\ -\ 6\ 9\ 7\ 0 \\ \hline 1\ 3\ 3\ 0 \end{array}$$

8300 – 6970 = 1330
Edward bought 1330 ml of paint.

$$\begin{array}{r} 8\ 3\ 0\ 0 \\ +\ 1\ 3\ 3\ 0 \\ \hline 9\ 6\ 3\ 0 \end{array}$$

8300 + 1330 = 9630
They bought **9630 ml** of paint altogether.

15. 125 g
Kelly ?
sister

$$\begin{array}{r} {}^{1}\,{}^{2}\,5 \\ \times\quad 4 \\ \hline 5\ 0\ 0 \end{array}$$

125 × 4 = 500
Her sister used **500 g** more flour than Kelly.

16. 135 cm
A ?
B

$$\begin{array}{r} {}^{1}\,{}^{2}\,5 \\ \times\quad 4 \\ \hline 5\ 4\ 0 \end{array}$$

135 × 4 = 540
The total height of both trees is **540 cm**.

17. 1 km 400 m | 800 m | 1 km 10 m
?

1 km 400 m + 800 m + 1 km 10 m = 3 km 210 m
Margaret had walked a total distance of **3 km 210 m**.

18. Jake 6500 ml 2765 ml
brother ?

$$\begin{array}{r} {}^{1}\,6\ 5\ 0\ 0 \\ +\ 2\ 7\ 6\ 5 \\ \hline 9\ 2\ 6\ 5 \end{array}$$

6500 + 2765 = 9265
His brother uses 9265 ml of water.
9265 + 6500 = 15 765
15 765 ml = 15 000 ml + 765 ml
= 15 *l* 765 ml
Both of them use **15 *l* 765 ml** of water.

$$\begin{array}{r} 9\ 2\ 6\ 5 \\ +\ 6\ 5\ 0\ 0 \\ \hline 1\ 5\ 7\ 6\ 5 \end{array}$$

19. 420 ml
?

$$\begin{array}{r} {}^{1}\,4\ 2\ 0 \\ \times\quad 8 \\ \hline 3\ 3\ 6\ 0 \end{array}$$

(a) 420 × 8 = 3360
The total volume of 8 such glasses of soft drink was **3360 ml**.

(b) 3360 + 250 = 3610
3610 ml = 3000 ml + 610 ml
= 3 *l* 610 ml
There was **3 *l* 610 ml** of soft drink in the bottle at first.

$$\begin{array}{r} 3\ {}^{1}\,3\ 6\ 0 \\ +\quad 2\ 5\ 0 \\ \hline 3\ 6\ 1\ 0 \end{array}$$

20. 14 *l*
2 *l*

(a) 14 ÷ 2 = 7
He could fill **7** such pots of coffee.

(b) 7 – 2 = 5
5 pots of coffee were used.

Review 5 (Questions available online.)

1. (a) **4, 15**
415 cm = 400 cm + 15 cm = 4 m 15 cm
(b) **8, 30**
830 cm = 800 cm + 30 cm = 8 m 30 cm

2. (a) **6, 269**
6269 m = 6000 m + 269 m = 6 km 269 m
(b) **5, 500**
5500 m = 5000 m + 500 m = 5 km 500 m

3. (a) **7, 670**
7670 g = 7000 g + 670 g = 7 kg 670 g
(b) **4, 8**
4008 g = 4000 g + 8 g = 4 kg 8 g

4. (a) **4, 835**
4835 ml = 4000 ml + 835 ml = 4 *l* 835 ml
(b) **6, 505**
6505 ml = 6000 ml + 505 ml = 6 *l* 505 ml

5. (a) **6975**
6000 m + 975 m = 6975 m
(b) **8008**
8000 m + 8 m = 8008 m

6. (a) **905**
900 cm + 5 cm = 905 cm
(b) **1000**
10 × 100 = 1000 cm

7. (a) **2002**
2000 ml + 2 ml = 2002 ml
(b) **5275**
5000 ml + 275 ml = 5275 ml

8. (a) **2636**
2000 g + 636 g = 2636 g
(b) **5030**
5000 g + 30 g = 5030 g

9. **2000**
2 kg = 2000 g

10. 1 *l* + 500 ml + 70 ml = 1 *l* 570 ml
= 1000 ml + 570 ml
= **1570** ml

11. (a) **3.20**
$1.50 + $1.70 = $3.20
(b) **3.40**
2 × $0.80 = $1.60
$5.00 – $1.60 = $3.40
(c) **40.55**
4 × $10 = $40
$40 + 50¢ = $40.50

12. (a) **850**
(b) **1400**
1 km 400 m = 1000 m + 400 m = 1400 m
(c) **1175**
1 km 175 m = 1000 m + 175 m = 1175 m

13. $1200
$500 | $375 | ?
parents spend save

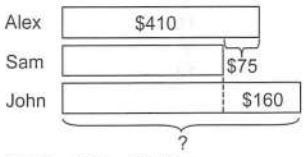
$$\begin{array}{r} \$\ 5\ 0\ 0 \\ +\ \$\ 3\ 7\ 5 \\ \hline \$\ 8\ 7\ 5 \end{array}$$

$500 + $375 = $875
$1200 – $875 = $325
Ken saves **$325**.

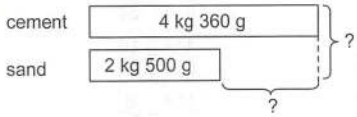
$$\begin{array}{r} \$\ {}^{0}\,{}^{11}\,{}^{9}\,{}^{10}\cancel{1}\,\cancel{2}\,\cancel{0}\,0 \\ -\ \$\quad 8\ 7\ 5 \\ \hline \$\quad 3\ 2\ 5 \end{array}$$

14. 8 km 120 m | 8 km 120 m
?

8 km 120 m + 8 km 120 m = 16 km 240 m
Benjamin jogs **16 km 240 m** daily.

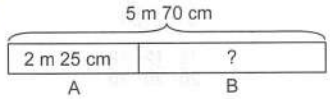
15. 

$410 – $75 = $335
Sam spends $335.
$335 + $160 = $495
John spends **$495**.

16. 

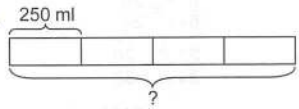
(a) 4 kg 360 g – 2 kg 500 g = 1 kg 860 g
He uses **1 kg 860 g** more cement than sand.

(b) 4 kg 360 g + 2 kg 500 g = 6 kg 860 g
The total mass of the mixture is **6 kg 860 g**.

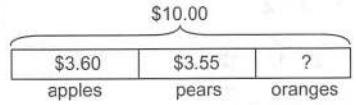
17. 

(a) 5 m 70 cm – 2 m 25 cm = 3 m 45 cm
Pole B is longer.

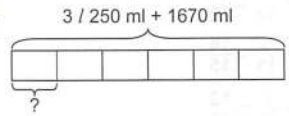
(b) 3 m 45 cm – 2 m 25 cm = 1 m 20 cm
Pole B is **120 cm** longer than Pole A.

18. 

250 × 4 = 1000
1000 ml = 1 *l*
The total volume of the four packets of milk is **1 *l***.

19. 

$3.60 + $3.55 = $7.15
$10.00 – $7.15 = $2.85
The oranges cost **$2.85**.

20. 

3250 + 1670 = 4920
4920 ÷ 6 = 820
There was **820 ml** of orange juice in each container.

Unit 11: Bar Graphs

Read and interpret data from bar graphs

1. (a) **28**
   (b) **bananas**
   (c) **oranges**
   (d) 36 – 16 = **20**
   (e) 28 – 20 = **8**
   (f) 16 + 28 + 36 + 20 = **100**

2. (a) **20**
   (b) 16 – 14 = **2**
   (c) 20 – 8 = **12**
   (d) **dragonflies**
   (e) **birds**
   (f) 14 + 2 + 20 + 8 + 16 = **60**

3. (a) **45**
   (b) 40 – 15 = **25**
   (c) **Thursday**
   35¢ ÷ 7 = 5¢
   (d) **1.60**
   15¢ + 40¢ + 20¢ + 5¢ + 45¢ + 35¢ = 160¢ = $1.60
   (e) **8.40**
   $10.00 – $1.60 = $8.40

4. (a) **6**
   (b) **10**
   (c) 18 – 4 = **14**
   (d) 18 – 12 = **6**
   (e) 12 + 6 + 18 + 4 + 10 = **50**

5. (a) **$110**
   (b) **$70**
   (c) **Amy, Dora**
   (d) $130 – $60 = **$70**
   (e) **Beth, Fiona**
   $60 + $70 = $130
   (f) $80 + $60 + $110 + $80 + $130 + $70 = **$530**

6. (a) **38**
   (b) **28**
   (c) **6**
   24 – 18 = 6
   (d) **Amelie**
   (e) **Cayden**
   (f) **108**
   38 + 28 = 66
   18 + 24 = 42
   66 + 42 = 108

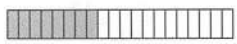
Unit 12: Fractions

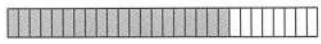
Recognise and understand equivalent fractions

(A) 1.  $\frac{4}{8}$

2.  $\frac{6}{8}$

3.  $\frac{16}{24}$

4.  $\frac{8}{20}$

5.  $\frac{20}{28}$

(B) 1. $\frac{1}{2}, \frac{3}{6}, \frac{4}{8}$

2. $\frac{1}{3}, \frac{3}{9}, \frac{5}{15}$
   $\frac{2}{3}, \frac{6}{9}, \frac{10}{15}$

(C) 1. 8 × 5 = **40**
2. 3 × 4 = **12**
3. 10 × 8 = **80**
4. 9 × 7 = **63**
5. 4 × 4 = **16**
6. 7 × 3 = **21**
7. 2 × 6 = **12**
8. 11 × 7 = **77**
9. 3 × 6 = **18**
10. 8 × 4 = **32**

(D) 1. **2, 15, 20, 25**
$1 \times 2 = 2$
$5 \times 3 = 15$
$5 \times 4 = 20$
$5 \times 5 = 25$

2. **6, 9, 32, 40**
$3 \times 2 = 6$
$3 \times 3 = 9$
$8 \times 4 = 32$
$8 \times 5 = 40$

3. **10, 6, 20, 25**
$5 \times 2 = 10$
$2 \times 3 = 6$
$5 \times 4 = 20$
$5 \times 5 = 25$

4. **8, 3, 16, 20**
$4 \times 2 = 8$
$1 \times 3 = 3$
$4 \times 4 = 16$
$4 \times 5 = 20$

5. **2, 3, 28, 35**
$1 \times 2 = 2$
$1 \times 3 = 3$
$7 \times 4 = 28$
$7 \times 5 = 35$

Express a fraction in its simplest form

1. $\frac{3}{9} \overset{\div 3}{=} \mathbf{\frac{1}{3}}$
2. $\frac{8}{16} \overset{\div 8}{=} \mathbf{\frac{1}{2}}$
3. $\frac{36}{45} \overset{\div 9}{=} \mathbf{\frac{4}{5}}$
4. $\frac{35}{42} \overset{\div 7}{=} \mathbf{\frac{5}{6}}$
5. $\frac{9}{63} \overset{\div 9}{=} \mathbf{\frac{1}{7}}$
6. $\frac{22}{33} \overset{\div 11}{=} \mathbf{\frac{2}{3}}$
7. $\frac{64}{72} \overset{\div 8}{=} \mathbf{\frac{8}{9}}$
8. $\frac{12}{18} \overset{\div 6}{=} \mathbf{\frac{2}{3}}$
9. $\frac{9}{24} \overset{\div 3}{=} \mathbf{\frac{3}{8}}$
10. $\frac{12}{36} \overset{\div 12}{=} \mathbf{\frac{1}{3}}$
11. $\frac{7}{28} \overset{\div 7}{=} \mathbf{\frac{1}{4}}$
12. $\frac{8}{20} \overset{\div 4}{=} \mathbf{\frac{2}{5}}$
13. $\frac{25}{35} \overset{\div 5}{=} \mathbf{\frac{5}{7}}$
14. $\frac{60}{96} \overset{\div 12}{=} \mathbf{\frac{5}{8}}$
15. $\frac{63}{81} \overset{\div 9}{=} \mathbf{\frac{7}{9}}$
16. $\frac{28}{44} \overset{\div 4}{=} \mathbf{\frac{7}{11}}$
17. $\frac{24}{32} \overset{\div 8}{=} \mathbf{\frac{3}{4}}$
18. $\frac{18}{30} \overset{\div 6}{=} \mathbf{\frac{3}{5}}$
19. $\frac{15}{27} \overset{\div 3}{=} \mathbf{\frac{5}{9}}$
20. $\frac{24}{108} \overset{\div 12}{=} \mathbf{\frac{2}{9}}$

Compare and arrange fractions

(A) 1. $\mathbf{\frac{4}{10}, \frac{5}{10}}$
2. $\mathbf{\frac{4}{8}, \frac{5}{8}}$
3. $\mathbf{\frac{7}{12}, \frac{6}{12}}$
4. $\mathbf{\frac{3}{4}, \frac{2}{4}}$
5. $\mathbf{\frac{3}{5}, \frac{4}{5}}$
6. $\mathbf{\frac{6}{9}, \frac{5}{9}}$

(B) 1. $\mathbf{\frac{2}{3}}$
$\frac{2}{3} \overset{\times 4}{=} \frac{8}{12}$

2. $\mathbf{\frac{2}{5}}$
$\frac{3}{8} \overset{\times 5}{=} \frac{15}{40}$
$\frac{2}{5} \overset{\times 8}{=} \frac{16}{40}$

3. $\mathbf{\frac{4}{6}}$
$\frac{4}{6} \overset{\times 4}{=} \frac{16}{24}$
$\frac{2}{8} \overset{\times 3}{=} \frac{6}{24}$

4. $\mathbf{\frac{2}{7}}$
$\frac{2}{7} \overset{\times 9}{=} \frac{18}{63}$
$\frac{1}{9} \overset{\times 7}{=} \frac{7}{63}$

5. $\mathbf{\frac{3}{11}}$
$\frac{3}{11} \overset{\times 4}{=} \frac{12}{44}$
$\frac{1}{4} \overset{\times 11}{=} \frac{11}{44}$

(C) 1. $\mathbf{\frac{1}{6}}$
2. $\mathbf{\frac{2}{9}}$
3. $\mathbf{\frac{3}{9}}$
4. $\mathbf{\frac{5}{11}}$
5. $\mathbf{\frac{7}{12}}$

(D) 1. $\mathbf{\frac{8}{9}, \frac{5}{9}, \frac{3}{9}}$

2. $\mathbf{\frac{3}{4}, \frac{4}{6}, \frac{2}{8}}$
$\frac{4}{6} \overset{\times 4}{=} \frac{16}{24}$
$\frac{2}{8} \overset{\times 3}{=} \frac{6}{24}$
$\frac{3}{4} \overset{\times 6}{=} \frac{18}{24}$

3. $\mathbf{\frac{3}{4}, \frac{7}{12}, \frac{1}{6}}$
$\frac{3}{4} \overset{\times 3}{=} \frac{9}{12}$
$\frac{1}{6} \overset{\times 2}{=} \frac{2}{12}$

4. $\mathbf{\frac{8}{9}, \frac{2}{5}, \frac{4}{15}}$
$\frac{2}{5} \overset{\times 4}{=} \frac{8}{20}$
$\frac{4}{15} \overset{\times 2}{=} \frac{8}{30}$

5. $\mathbf{\frac{6}{7}, \frac{6}{9}, \frac{6}{12}}$

(E) 1. $\mathbf{\frac{2}{5}, \frac{2}{4}, \frac{2}{3}}$

2. $\mathbf{\frac{1}{4}, \frac{3}{8}, \frac{4}{6}}$
$\frac{3}{8} \overset{\times 3}{=} \frac{9}{24}$
$\frac{4}{6} \overset{\times 4}{=} \frac{16}{24}$
$\frac{1}{4} \overset{\times 6}{=} \frac{6}{24}$

3. $\mathbf{\frac{1}{5}, \frac{3}{6}, \frac{6}{10}}$
$\frac{3}{6} \overset{\times 2}{=} \frac{6}{12}$
$\frac{1}{5} \overset{\times 6}{=} \frac{6}{30}$

4. $\mathbf{\frac{11}{20}, \frac{12}{20}, \frac{18}{20}}$

5. $\mathbf{\frac{4}{7}, \frac{2}{3}, \frac{5}{6}}$
$\frac{4}{7} \overset{\times 5}{=} \frac{20}{35}$
$\frac{5}{6} \overset{\times 4}{=} \frac{20}{24}$
$\frac{2}{3} \overset{\times 10}{=} \frac{20}{30}$

Add and subtract fractions

(A) 1. $\frac{1}{4} + \frac{1}{2} \overset{\times 2}{=} \frac{1}{4} + \frac{2}{4} = \mathbf{\frac{3}{4}}$
2. $\frac{5}{12} + \frac{1}{6} \overset{\times 2}{=} \frac{5}{12} + \frac{2}{12} = \mathbf{\frac{7}{12}}$
3. $\frac{2}{5} \overset{\times 2}{+} \frac{3}{10} = \frac{4}{10} + \frac{3}{10} = \mathbf{\frac{7}{10}}$
4. $\frac{3}{8} + \frac{1}{4} \overset{\times 2}{=} \frac{3}{8} + \frac{2}{8} = \mathbf{\frac{5}{8}}$
5. $\frac{1}{3} \overset{\times 4}{+} \frac{7}{12} = \frac{4}{12} + \frac{7}{12} = \mathbf{\frac{11}{12}}$
6. $\frac{8}{15} + \frac{2}{5} \overset{\times 3}{=} \frac{8}{15} + \frac{6}{15} = \mathbf{\frac{14}{15}}$
7. $\frac{1}{5} \overset{\times 5}{+} \frac{7}{25} = \frac{5}{25} + \frac{7}{25} = \mathbf{\frac{12}{25}}$
8. $\frac{1}{12} + \frac{1}{2} \overset{\times 6}{=} \frac{1}{12} + \frac{6}{12} = \mathbf{\frac{7}{12}}$
9. $\frac{2}{9} + \frac{1}{3} \overset{\times 3}{=} \frac{2}{9} + \frac{3}{9} = \mathbf{\frac{5}{9}}$
10. $\frac{5}{16} + \frac{1}{4} \overset{\times 4}{=} \frac{5}{16} + \frac{4}{16} = \mathbf{\frac{9}{16}}$

(B) 1. $\frac{4}{5} \overset{\times 2}{-} \frac{7}{10} = \frac{8}{10} - \frac{7}{10} = \mathbf{\frac{1}{10}}$
2. $\frac{7}{8} - \frac{3}{4} \overset{\times 2}{=} \frac{7}{8} - \frac{6}{8} = \mathbf{\frac{1}{8}}$
3. $\frac{5}{6} \overset{\times 2}{-} \frac{5}{12} = \frac{10}{12} - \frac{5}{12} = \mathbf{\frac{5}{12}}$

4. $\frac{4}{9} - \frac{1 \times 3}{3 \times 3} = \frac{4}{9} - \frac{3}{9} = \mathbf{\frac{1}{9}}$

5. $\frac{5}{8} - \frac{1 \times 4}{2 \times 4} = \frac{5}{8} - \frac{4}{8} = \mathbf{\frac{1}{8}}$

6. $\frac{14}{15} - \frac{2 \times 5}{3 \times 5} = \frac{14}{15} - \frac{10}{15} = \mathbf{\frac{4}{15}}$

7. $\frac{13}{18} - \frac{1 \times 6}{3 \times 6} = \frac{13}{18} - \frac{6}{18} = \mathbf{\frac{7}{18}}$

8. $\frac{2 \times 2}{3 \times 2} - \frac{1 \times 3}{2 \times 3} = \frac{4}{6} - \frac{3}{6} = \mathbf{\frac{1}{6}}$

9. $\frac{3 \times 3}{4 \times 3} - \frac{2 \times 4}{3 \times 4} = \frac{9}{12} - \frac{8}{12} = \mathbf{\frac{1}{12}}$

10. $\frac{5 \times 5}{6 \times 5} - \frac{3 \times 6}{5 \times 6} = \frac{25}{30} - \frac{18}{30} = \mathbf{\frac{7}{30}}$

(C) 1. $\frac{1}{9} + \frac{1 \times 3}{3 \times 3} + \frac{4}{9} = \frac{1}{9} + \frac{3}{9} + \frac{4}{9} = \mathbf{\frac{8}{9}}$

2. $\frac{1 \times 2}{4 \times 2} + \frac{3}{8} + \frac{1}{8} = \frac{2}{8} + \frac{3}{8} + \frac{1}{8} = \mathbf{\frac{6}{8}}$

3. $1 - \frac{7}{12} - \frac{1 \times 2}{6 \times 2} = \frac{12}{12} - \frac{7}{12} - \frac{2}{12} = \mathbf{\frac{3}{12}}$

4. $1 - \frac{1 \times 3}{3 \times 3} - \frac{5}{9} = \frac{9}{9} - \frac{3}{9} - \frac{5}{9} = \mathbf{\frac{1}{9}}$

5. $\frac{3}{10} + \frac{1 \times 5}{2 \times 5} + \frac{1}{10} = \frac{3}{10} + \frac{5}{10} + \frac{1}{10} = \mathbf{\frac{9}{10}}$

6. $\frac{2}{6} + \frac{1 \times 2}{3 \times 2} + \frac{1}{6} = \frac{2}{6} + \frac{2}{6} + \frac{1}{6} = \mathbf{\frac{5}{6}}$

7. $1 - \frac{3}{8} - \frac{1 \times 4}{2 \times 4} = \frac{8}{8} - \frac{3}{8} - \frac{4}{8} = \mathbf{\frac{1}{8}}$

8. $1 - \frac{3 \times 2}{5 \times 2} - \frac{1}{10} = \frac{10}{10} - \frac{6}{10} - \frac{1}{10} = \mathbf{\frac{3}{10}}$

Unit 13: Time

Read and write the correct time

(A) 1. **4.25, 25 minutes past 4**
2. **5.50, 10 minutes to 6**
3. **10.15, 15 minutes past 10**
4. **3.05, 5 minutes past 3**
5. **6.55, 5 minutes to 7**
6. **9.30, 30 minutes past 9**
7. **7.40, 20 minutes to 8**
8. **2.10, 10 minutes past 2**
9. **10.45, 15 minutes to 11**
10. **4.35, 25 minutes to 5**

(B) 1. **1.11**
2. **6.29**
3. **25**
4. **19**
5. **4**
6. **7**
7. **11.51**
8. **2.44**
9. **5**
10. **22**
11. **6**
12. **10**

Express time in minutes or hours and minutes

(A) 1. 60 min + 20 min = **80** min

2. 4 × 60 min = 240 min
240 min + 5 min = **245** min

3. 8 × 60 min = 480 min
480 min + 15 min = **495** min

4. 6 × 60 min = 360 min
360 min + 30 min = **390** min

5. 2 × 60 min = 120 min
120 min + 55 min = **175** min

6. 7 × 60 min = 420 min
420 min + 25 min = **445** min

7. 10 × 60 min = 600 min
600 min + 10 min = **610** min

8. 5 × 60 min = 300 min
300 min + 50 min = **350** min

9. 3 × 60 min = 180 min
180 min + 25 min = **205** min

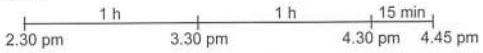
10. 9 × 60 min = 540 min
540 min + 45 min = **585** min

(B) 1. 420 min ÷ 60 min = **7** h
2. 300 min ÷ 60 min = **5** h
3. 600 min ÷ 60 min = **10** h
4. 240 min ÷ 60 min = **4** h
5. 540 min ÷ 60 min = **9** h

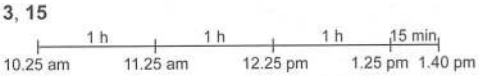
(C) 1. 515 min = 480 min + 35 min = **8** h **35** min
2. 455 min = 420 min + 35 min = **7** h **35** min
3. 190 min = 180 min + 10 min = **3** h **10** min
4. 430 min = 420 min + 10 min = **7** h **10** min
5. 150 min = 120 min + 30 min = **2** h **30** min
6. 305 min = 300 min + 5 min = **5** h **5** min
7. 560 min = 540 min + 20 min = **9** h **20** min
8. 280 min = 240 min + 40 min = **4** h **40** min
9. 385 min = 360 min + 25 min = **6** h **25** min
10. 655 min = 600 min + 55 min = **10** h **55** min

Find duration between two different times

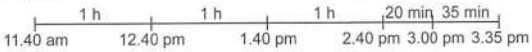
1. **2, 15**



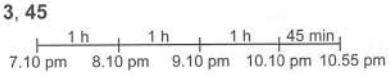
2. **3, 15**



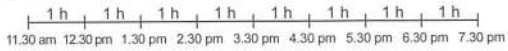
3. **3, 55**



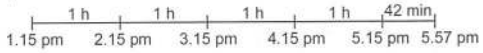
4. **3, 45**



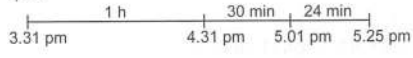
5. **8, 0**



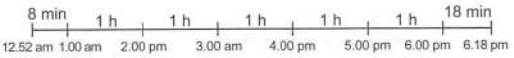
6. **4, 42**



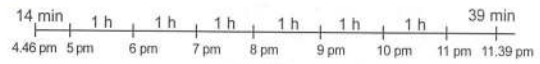
7. **1, 54**



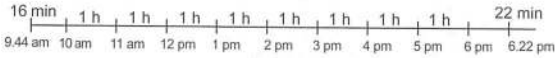
8. **5, 26**



9. **6, 53**



10. **8, 38**



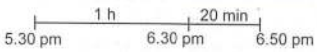
Find the starting time or ending time

(A) 1. **8.00 pm**
2. **12.00 am**
3. **12.00 pm**
4. **8.49 am**
5. **6.25 pm**
6. **8.02 am**
7. **6.56 pm**
8. **10.00 am**
9. **11.02 pm**
10. **1.48 am**

(B) 1. **6.00 am**
2. **5.00 am**
3. **11.40 am**
4. **6.52 am**
5. **6.15 am**
6. **4.46 pm**
7. **11.08 am**
8. **8.35 am**
9. **2.59 pm**
10. **5.15 am**

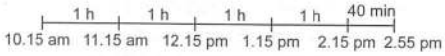
Solve word problems related to time

1.



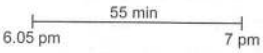
The play ended at **6.50 pm**.

2.



He stayed at his friend's house for **4 h 40 min**.

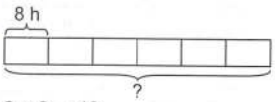
3.



She must leave her house at **6.05 pm**.

4. 3 + 2 + 3 + 4 + 2 + 5 = 19 h
19 × $125 = $2375
Mr Matthew earns **$2375** in a week.

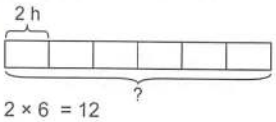
5. (a)



8 × 6 = 48
The total number of hours she works in a week is **48 h**.

(b) 48 × $9 = $432
She earns **$432** in a week.

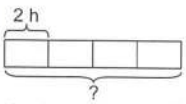
6. (a)



2 × 6 = 12
He needs **12 h** to proofread a series of six books.

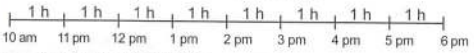
(b) 12 × $15 = $180
The total amount of money he will be paid for proofreading the six books is **$180**.

7. (a)



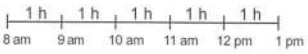
2 × 4 = 8
He took **8 h** to paint the 4 drawings.

(b)



He finished at **6.00 pm**.

8. (a)

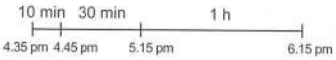


She arrived in Kuala Lumpur at **1.00 pm**.

(b) 5 h – 4 h 5 min = 55 min
The flight was **55 min**.

9. (a) 6.25 pm – 10 min = 6.15 pm
The actual time she finished her movie was **6.15 pm**.

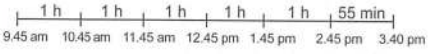
(b)



It started at **4.35 pm**.

10. (a) 2 h 40 min + 3 h 15 min = 5 h 55 min
Both of them worked on the sculpture for **5 h 55 min**.

(b)



They finished working on the sculpture at **3.40 pm**.

Review 6 (Questions available online.)

1. (a) **8**
(b) **6**
(c) 16 – 10 = **6**
(d) 6 – 4 = **2**
(e) 4 + 10 + 8 + 16 + 6 = **44**

2. $\frac{2}{9}\times\frac{5}{5}=\frac{\mathbf{10}}{45}$

3. $\frac{3}{7}\times\frac{4}{4}=\frac{\mathbf{12}}{28}$

4. $\frac{8}{10}\div\frac{2}{2}=\frac{\mathbf{4}}{5}$

5. $\frac{15}{25}\div\frac{5}{5}=\frac{\mathbf{3}}{5}$

6. 76 min = 60 min + 16 min
= **1** h **16** min

7. 4 × 60 min = 240 min
240 min + 15 min
= **255** min

8. $\frac{1}{4}\times\frac{2}{2}+\frac{2}{8}+\frac{3}{8}$
$=\frac{2}{8}+\frac{2}{8}+\frac{3}{8}$
$=\frac{\mathbf{7}}{8}$

9. $1-\frac{1}{5}\times\frac{2}{2}-\frac{7}{10}$
$=\frac{10}{10}-\frac{2}{10}-\frac{7}{10}$
$=\frac{\mathbf{1}}{10}$

10. (a) $\frac{\mathbf{4}}{5}$
$\frac{4}{5}\times\frac{2}{2}=\frac{8}{10}$

(b) $\frac{\mathbf{8}}{9}$
$\frac{2}{3}\times\frac{3}{3}=\frac{6}{9}$

11. (a) $\frac{2}{7}$

(b) $\frac{1}{4}$

$\frac{1 \times 2}{4 \times 2} = \frac{2}{8}$

12. $\frac{2}{3}, \frac{3}{6}, \frac{1}{6}$

$\frac{2 \times 2}{3 \times 2} = \frac{4}{6}$

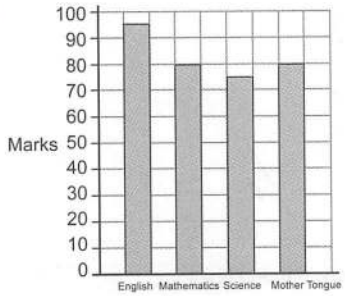
13. $\frac{1}{9}, \frac{1}{5}, \frac{1}{3}$

14. **20 minutes**, **7**

15. **1.35 pm**

16. **11.28 am**

17. (a)



(b) **Science**

(c) 80 – 75 = **5**

(d) 95 – 80 = **15**

(e) 95 + 80 + 80 = **255**

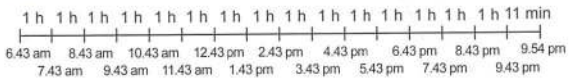
17. **5**, **30**

9 h 15 min = 8 h 60 min + 15 min = 8 h 75 min

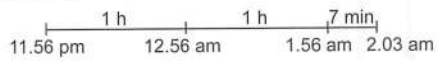
8 h – 3 h = 5 h

75 min – 45 min = 30 min

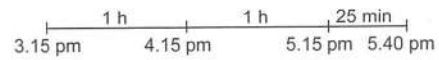
18. **15** h **11** min



19. **2** h **7** min



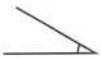
20.



She left the library at **5.40 pm**.

Unit 14: Angles

Identify angles and right angles

		Acute	Right	Obtuse
(A) 1.		✓		
2.				✓
3.				✓
4.			✓	
5.		✓		
6.			✓	
7.				✓
8.		✓		
9.		✓		
10.			✓	
11.				✓
12.			✓	

(B) 1. (a) 

(b) 

(c) 

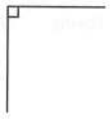
(d) 

(e) 

(f) 

Unit 15: Perpendicular and Parallel Lines

Identify and draw perpendicular lines

(A) 1. 

✓

2. 

✓

3. ×

4. 

✓

5. ×

6. ×

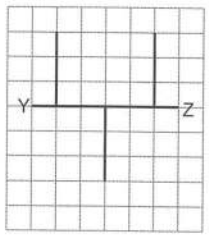
(B) 1. DC ⊥ AB
HG ⊥ AB

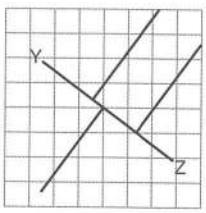
2. AB ⊥ CD
KJ ⊥ BA
LM ⊥ NO

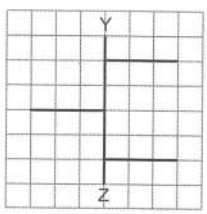
3. BC ⊥ CD
ED ⊥ CD
DE ⊥ FE
GF ⊥ FE
AG ⊥ AB

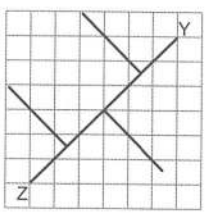
4. AB ⊥ BC
HG ⊥ GF
DC ⊥ CB
EF ⊥ FG
CD ⊥ DE
FE ⊥ ED
BA ⊥ AH
GH ⊥ HA

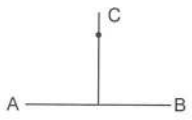
(C) *(Accept other correct answers.)*

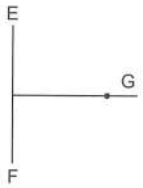
1. 

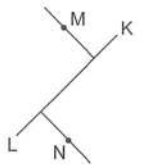
2. 

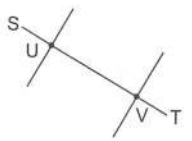
3. 

4. 

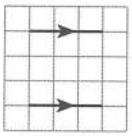
(D) 1. 

2. 

3. 

4. 

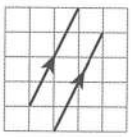
Identify and draw parallel lines

(A) 1. 

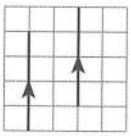
✓

2. ×

3. ×

4. 

✓

5. 

✓

6. ×

(B) 1. AB // DC

2. AB // DC
AD // BC

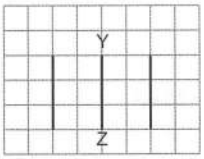
3. CD // AF
CB // DE
BA // EF

4. AB // CD
GH // ML

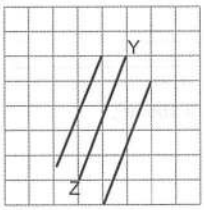
5. AB // LM
HG // FE
ON // KJ

(C) *(Accept other correct answers.)*

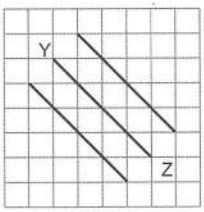
1.



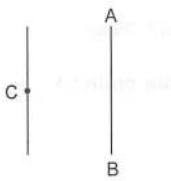
2.



3.



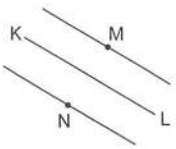
(D) 1.



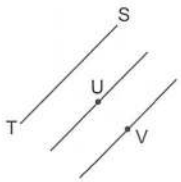
2. E F

G

3.



4.



Unit 16: Area and Perimeter

Find the area and perimeter of figures in square units, cm^2 and m^2

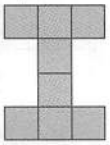
(A) 1. **7**
2. **10**
3. **6**
4. **12**
5. **5**
6. **11**
7. **9**
8. **8**
9. **7**
10. **10**

(B) 1. (a) **13**
(b) **9**
(c) **9**
(d) **8**
(e) **10**
(f) **B, C**
(g) **D**
(h) **A**

2. (a) **9**
(b) **10**
(c) **11**
(d) **8**
(e) **16**
(f) **I**
(g) **J**

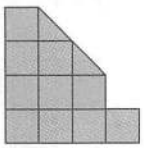
(C) *(Accept other correct answers.)*

1.



The area of the figure is **8** square units.

2.

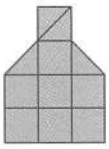


The area of the figure is **11** square units.

3.

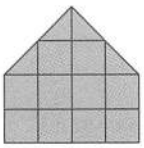
The area of the figure is **7** square units.

4.



The area of the figure is **9** square units.

5.

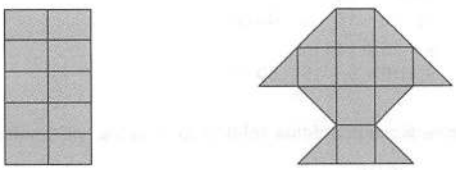


The area of the figure is **12** square units.

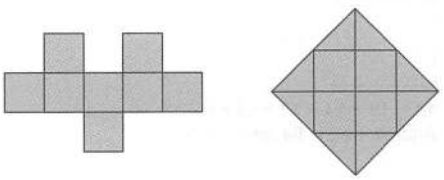
(D) *(Accept other correct answers.)*

1.

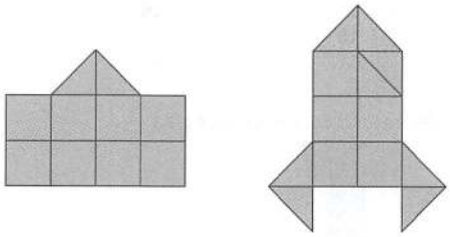
2.



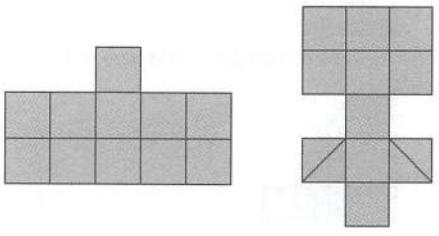
3.



4.



5.



(E) 1. **14**
2. **18**
3. **22**
4. **20**
5. **28**

(F) 1. (a) **11**
(b) **14**
(c) **12**
(d) **16**
(e) **20**
(f) **22**
(g) **18**
(h) **20**
(i) **A**
(j) **D**
(k) **C**
(l) **B**

2. (a) **17**
(b) **20**
(c) **16**
(d) **18**
(e) **28**
(f) **24**
(g) **24**
(h) **22**
(i) **G**
(j) **F**
(k) **H**
(l) **E**

(G) 1. 9 + 4 + 3 + 5 + 6 + 9 = **36** cm
2. 13 + 10 + 15 + 9 = **47** cm
3. 11 + 14 + 17 = **42** cm
4. 15 + 9 + 9 + 15 + 22 = **70** m
5. 30 + 2 + 7 + 6 + 8 + 5 + 15 + 14 = **87** m

Use the formula to find the area of figures

1. 3 × 12 = **36** m^2
3 + 12 + 3 + 12 = **30** m
2. 13 × 4 = **52** cm^2
13 + 4 + 13 + 4 = **34** cm
3. 6 × 6 = **36** m^2
6 + 6 + 6 + 6 = **24** m
4. 15 × 8 = **120** cm^2
15 + 8 + 15 + 8 = **46** cm
5. 9 × 16 = **144** m^2
9 + 16 + 9 + 16 = **50** m

Solve word problems related to area and perimeter

1. 18 cm, 14 cm

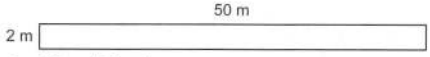
14 + 18 + 14 + 18 = 64 cm
Andrew needs **64 cm** of wire.

2. 8 cm, 6 cm

6 × 8 = 48 m^2
The area that Mary mops is **48 m^2**.

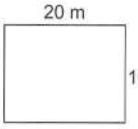
3. 240 ÷ 4 = 60 m
The length of each side of the square field is **60 m**.

4. 50 m, 2 m



2 × 50 = 100 m^2
The area of the plot of soil is **100 m^2**.

5. 20 m, 16 m



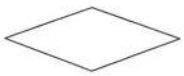
20 + 16 + 20 + 16 = 72 m
The fence will be **72 m** long.

6. 9 m, 4 m

9 × 4 = 36 m^2
The area that Stephanie paints is **36 m^2**.

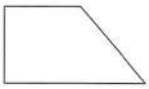
Review 7 (Questions available online.)

1.



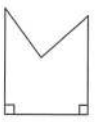
2. (a) **16**
(b) **22**

3.



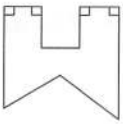
4. **AH ⊥ HG**
GF ⊥ HG
GF ⊥ FE
ED ⊥ DC

5. (a)

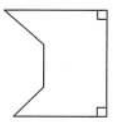


(b)

(c)



(d)



(e)

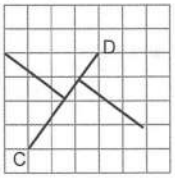
6. (a) **20**
(b) **10**
(c) **14**
(d) **11**
(e) **18**
(f) **16**
(g) **18**
(h) **24**
(i) **B**
(j) **D**

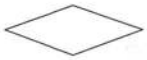
7. **AB // CD**
HG // ML

8. 24 + 14 + 6 + 9 + 18 + 5 = **76 cm**

9. *(Accept other correct answers.)*
BA // KL or **DC // HJ** or **AL // BC** or **AL // JK** or **BC // ED** or **JK // HG** or **AL // ED** or **AL // HG**

10. *(Accept other correct answers.)*



11. 

12. 32 × 8 = **256** cm²
32 + 8 + 32 + 8 = **80** cm

13. 12 × 12 = **144 cm²**

14. 9 + 9 + 9 + 9 + 9 + 9 + 9 + 9 = 72 cm
The perimeter of the figure is **72 cm**.

15. 15 × 2 = 30 cm
Its length is 30 cm.
15 + 30 + 15 + 30 = 90 cm
The perimeter of the lunch box is **90 cm**.

16. 20 × 8 = 160 m²
The area of the room is **160 m²**.

17. 30 × 15 = 450 cm²
450 – 80 = 370 cm²
The area of the remaining wrapping paper was **370 cm²**.

18. 14 × 11 = 154 cm²
154 × 2 = 308 cm²
The area of the piece of drawing paper was **308 cm²**.

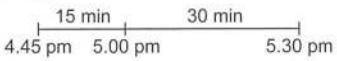
19. 25 – 13 = 12 cm
13 + 9 + 12 + 7 + 25 + 16 = 82 cm
The perimeter of the remaining cardboard is **82 cm**.

20. 5 + 8 + 5 + 8 + 5 + 8 + 5 + 8 = 52 cm
The perimeter of the two stickers was **52 cm**.

(Questions available online.
Revision Test 2 Also available on Geniebook.)

1. (a) **AB ⊥ GH, CD ⊥ GH**
(b) **AB // CD**

2. **5.30 pm**



3. (a) 300 cm + 7 cm = **3** m **7** cm
(b) 43 000 g + 210 g = **43 210** g
(c) 80 000 mℓ + 10 mℓ = **80 010** mℓ
(d) 4000 m + 40 m = **4040** m

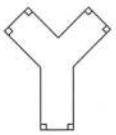
4. (a) **chicken rice**
(b) **40**
(c) 55 – 15 = **40**
(d) 20 – 5 = **15**
(e) 15 + 5 = **20**

5. (a) **$3.30**
$2.35 + $0.95 = $3.30
(b) **$1.40**
$2 + $1.60 = $3.60
$5 – $3.60 = $1.40
(c) **$0.30 / 30¢**
$0.95 + $1.35 = $2.30
$2.30 – $2 = $0.30
(d) **notebook, pen and sharpener**
$1.60 + $1.35 + $0.95 = $3.90

6. (a) $\frac{3}{7} \times \frac{3}{3} = \frac{9}{21}$
(b) $\frac{2}{4} \times \frac{4}{4} = \frac{8}{16}$
(c) $\frac{8}{11} \times \frac{4}{4} = \frac{32}{44}$
(d) $\frac{4}{9} \times \frac{3}{3} = \frac{12}{27}$

7. (a) $\frac{8}{12} \div \frac{4}{4} = \frac{2}{3}$
(b) $\frac{3}{6} \div \frac{3}{3} = \frac{1}{2}$
(c) $\frac{6}{8} \div \frac{2}{2} = \frac{3}{4}$
(d) $\frac{4}{10} \div \frac{2}{2} = \frac{2}{5}$

8. **39**

9. 

10. $\frac{1}{4}, \frac{3}{8}, \frac{3}{4}$
$\frac{1}{4} \times \frac{3}{3} = \frac{3}{12}$

11. (a) **4035**
4 km 35 m = 4000 m + 35 m
= 4035 m
(b) **2257**
1 km 210 m + 1 km 47 m = 2 km 257 m
= 2000 m + 257 m
= 2257 m
(c) 4 km 35 m + 3 km 939 m = **7** km **974** m
(d) **by the school**
(e) 7 km 974 m – 2 km 257 m = **5** km **717** m

12. **558.35**
$360.50 + $197.85 = $558.35

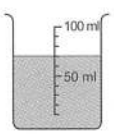
13. **7, 59**
1036 cm – 277 cm = 759 cm = 7 m 59 cm

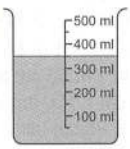
14. **16, 316**
7004 m + 9312 m = 16 316 m = 16 km 316 m

15. **381.30**
$469.20 – $87.90 = $381.30

16. **20, 441**
63 097 ml – 42 656 ml = 20 441 ml = 20 l 441 ml

17. **73, 995**
44 300 g + 29 695 g = 73 995 g = 73 kg 995 g

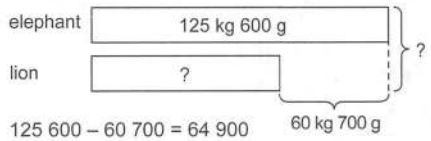
18. (a) 

(b) 

19. (a) **7.55 am**
(b) **1.55 pm**

20. $\frac{1}{9} + \frac{2}{3} \times \frac{3}{3} = \frac{1}{9} + \frac{6}{9} = \frac{7}{9}$

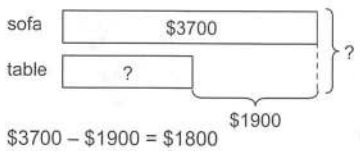
21. 12 × 10 = 120 m²
Robert will cement an area of **120 m²**.

22. 

125 600 – 60 700 = 64 900

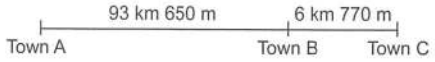
64 900 g = 64 kg 900 g
The lion has a mass of 64 kg 900 g.
125 600 + 64 900 = 190 500
190 500 g = 190 kg 500 g
The total mass of the two animals is **190 kg 500 g**.

23.



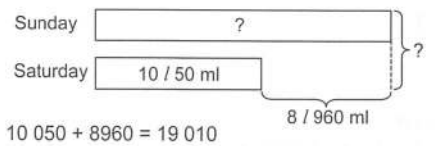
$3700 – $1900 = $1800
The table cost $1800.
$3700 + $1800 = $5500
Miranda paid **$5500** for the furniture in all.

24.



93 650 + 6770 = 100 420
100 420 m = 100 km 420 m
The ship travels **100 km 420 m** altogether.

25.

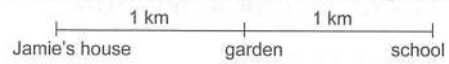


10 050 + 8960 = 19 010
19 010 ml = 19 / 10 ml
Mary cooked 19 / 10 ml of chicken soup on Sunday.
10 050 + 19 010 = 29 060
29 060 ml = 29 / 60 ml
The total volume of chicken soup that she had cooked on both days was **29 / 60 ml**.

Non-Routine Questions 2 (Questions available online.)

1. Use 'Guess and Check' method.
(2 × $10) + (1 × $5) + (2 × $2) + (1 × 50¢) + (2 × 20¢)
= $29.90
The dollar notes and coins she had given to the shopkeeper were **ten-dollar note, five-dollar note, two-dollar note, fifty-cent coin and twenty-cent coin.**

2.

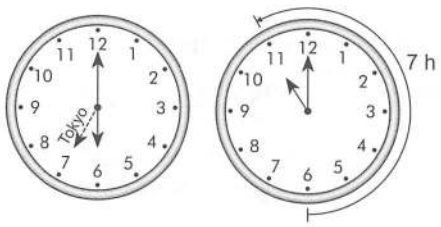


2 × 1 = 2 km
The distance from Jamie's house to her school is **2 km**.

3. Use 'Guess and Check' method.
12 + 34 = 46
43 + 21 = 64
A = **1**, B = **2**, C = **3**, D = **4**

4. 1 m + 50 cm = 1 m 50 cm
Plant B is 1 m 50 cm tall.
1 m – 5 cm = 100 cm – 5 cm = 95 cm
Plant C is 95 cm tall.
Plant B is the tallest and Plant C is the shortest.
1 m 50 cm + 95 cm = 2 m 45 cm
The total height of the tallest and the shortest plants is **2 m 45 cm**.

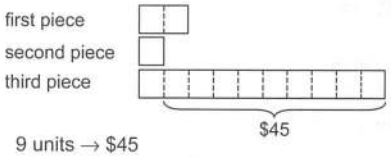
5.



Tokyo: 7 am
Singapore: 6 am
The time of his flight in Singapore was **11 pm** on **13 September**.

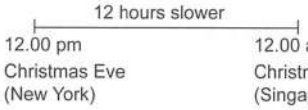
6. $\frac{1 \times 2}{4 \times 2} = \frac{2}{8}$
$\frac{2}{8}$ of the string was immersed in oil and water.
$\frac{1}{8} \rightarrow 5$ cm
$\frac{2}{8} \rightarrow 5 \times 2 = 10$ cm
$\frac{8}{8} \rightarrow 5 \times 8 = 40$ cm
The total length of the string was **40 cm**.

7.



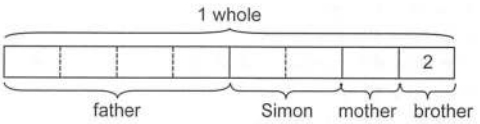
9 units → $45
1 unit → $45 ÷ 9 = $5
13 units → $5 × 13 = $65
Ken has **$65**.

8.



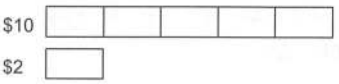
The time in New York will be **12.00 pm** on **Christmas Eve**.

9.



8 × 2 = 16
There were **16** pieces of pizza at first.

10. There are 4 pieces of dollar notes. One is 5 times the amount of the other dollar note.



5 × $2 = $10
$10 + $2 = $12
$2 × $12 = $24
The change was $24.
$50 – $24 = $26
The fish was **$26**.

11. 30 ÷ 3 = 10
10 × 1 cm = 10 cm
The bean plant will grow **10 cm** after 30 days.

12. From the given numbers,
118 + 159 = 277
387 + 513 = 900
118 + 269 = 387
277 + 623 = 900
623 – 269 = 354 or 513 – 159 = 354
The missing number is **354**.

LEARNING MATHEMATICS 3

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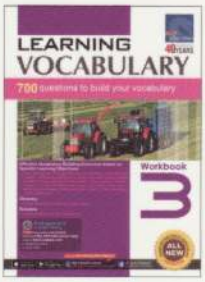

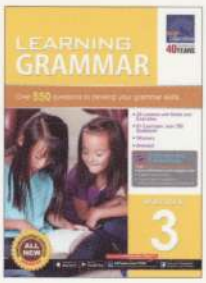

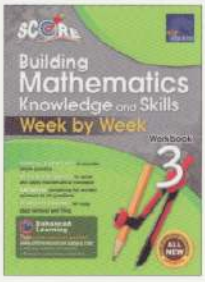

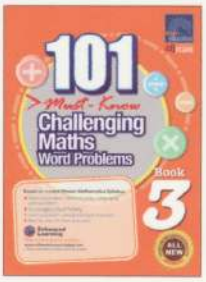

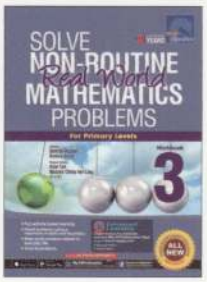

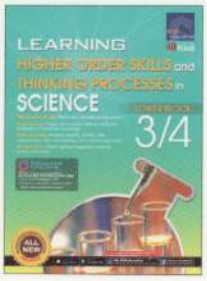

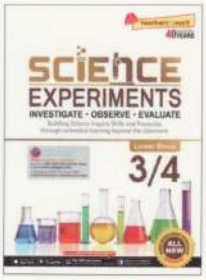

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