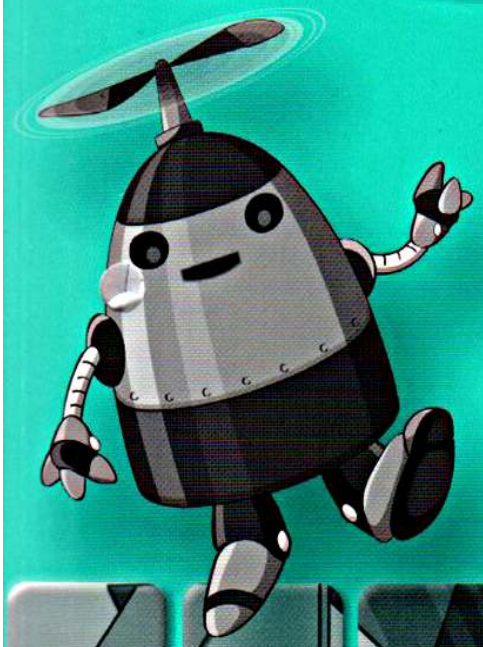
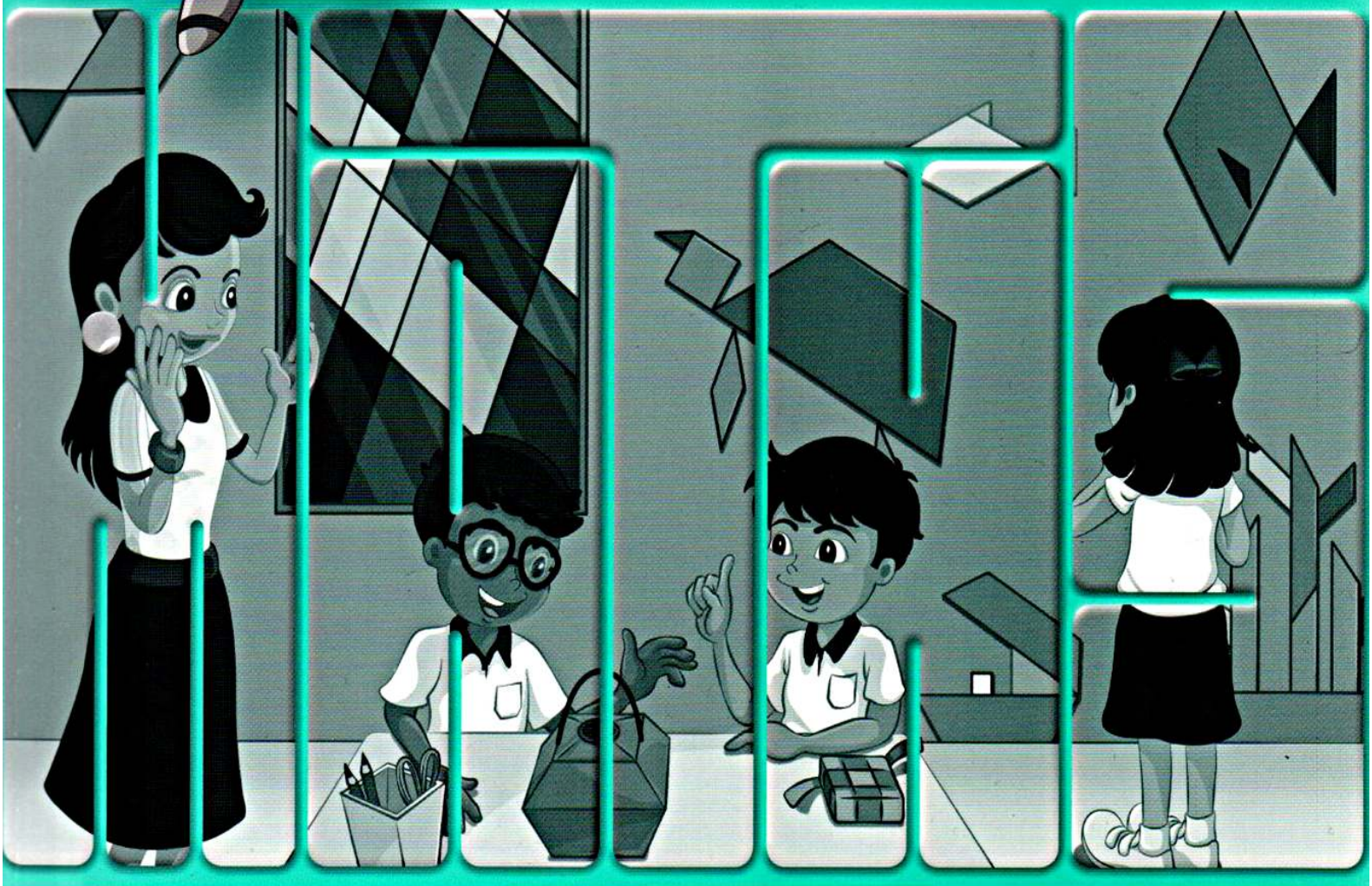
Targeting Mathematics

Workbook 5B

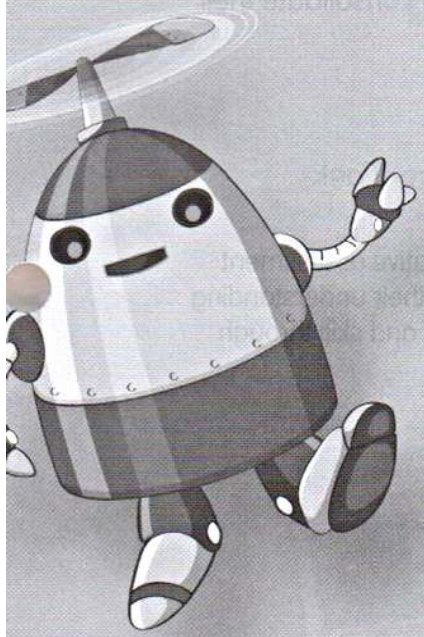


DR ERIC CHAN CHUN MING
CONSULTANT: PROF BERINDERJEET KAUR



Name: _____ Class: _____

Targeting Mathematics



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Dr Eric Chan Chun Ming

Consultant: Prof Berinderjeet Kaur

Star Publishing Pte Ltd

Preface

Targeting Mathematics is a series of textbooks and workbooks written based on the latest Primary Mathematics Syllabus provided by the Ministry of Education, Singapore. This series supports the Concrete-Pictorial-Abstract approach and uses ICT tools to enhance conceptual understanding. It incorporates the use of manipulatives, videos and online math activities as teaching aids in teaching mathematics.

The exercises in the workbooks are designed to support learning in a progressive manner. Through a combination of drilling, challenging and problem solving exercises, pupils can consolidate their mathematical concepts and build confidence in learning mathematics.

Features

Recall Worksheets

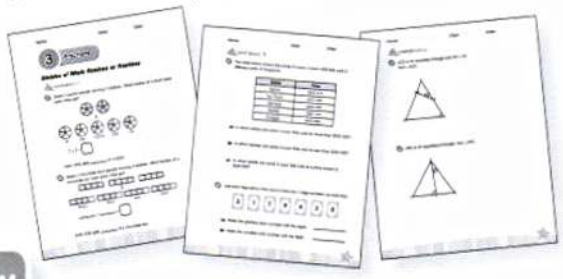
Allows pupils to revise what they have learnt before.

L1/L2/L3 Worksheets

L1 worksheets assess pupils' understanding of basic concepts and help them acquire the necessary process skills.

L2 worksheets assess pupils' understanding of moderately difficult concepts and help them acquire higher-order thinking skills.

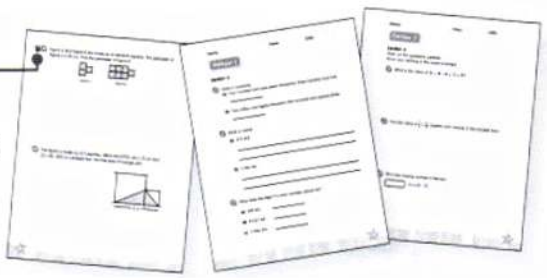
L3 worksheets assess pupils' understanding of concepts at a deeper level and encourage creative and critical thinking to solve non-routine, challenging mathematics problems.



Review

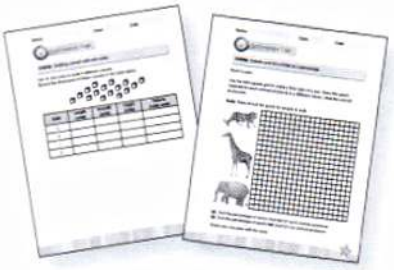
Allows pupils to revise and consolidate mathematical concepts learnt.

Pupils can use their calculators to work out answers.



Performance Task

Serves as a form of alternative assessment for pupils to demonstrate their understanding of mathematical concepts and skill through hands-on approaches.



Math Journal

Allows pupils to reflect on their learning.

Problem Solving

Activities are designed to encourage pupils to adopt a 4-stage structured process of thinking and solving problems creatively.

CONTENTS

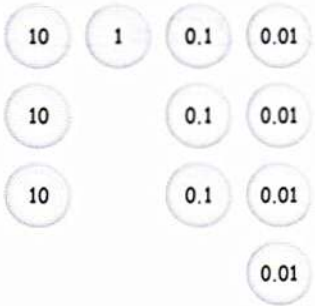
Name: Class: Date:

7 Decimals

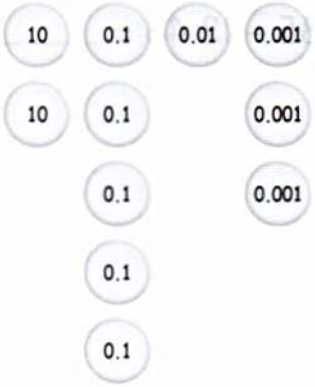
Recall (Decimals)

1. Write the decimal represented by the number discs.

(a)



(b)



2. Add.

(a) 0.4 + 0.76 = _____	**(b)** 2.59 + 8.02 = _____
(c) 10.11 + 0.99 = _____	**(d)** 5.48 + 12.57 = _____

3 Subtract.

(a) 0.73 – 0.45 = _____	**(b)** 1.48 – 0.96 = _____
(c) 24.35 – 13.48 = _____	**(d)** 35.05 – 22.37 = _____

4 Multiply.

(a) 3.6 × 3 = _____	**(b)** 25.7 × 4 = _____
(c) 5.73 × 5 = _____	**(d)** 37.69 × 7 = _____

5 Divide and give the answer correct to 1 decimal place.

(a) $25.32 \div 4 =$ _____
(to 1 decimal place)

(b) $14 \div 9 =$ _____
(to 1 decimal place)

6 Divide and give the answer correct to 2 decimal places.

(a) $37.16 \div 8 =$ _____
(to 2 decimal places)

(b) $49 \div 6 =$ _____
(to 2 decimal places)

7 Convert the following fractions to decimals.

(a) $\frac{8}{25}$	**(b)** $1\frac{1}{4}$
(c) $\frac{7}{2}$	**(d)** $5\frac{13}{50}$

8 Express each decimal as a fraction in its simplest form.

(a) 3.25	**(b)** 7.2
(c) 12.6	**(d)** 2.125

Name: Class: Date:

Multiplying by 10, 100 and 1000

L1 Worksheet 1

1 Multiply.

(a)

	Tens	Ones	Tenths	Hundredths	Thousandths
		0	6	2	1
×10					

(b)

	Tens	Ones	Tenths	Hundredths	Thousandths
		1	2	5	
×10					

(c)

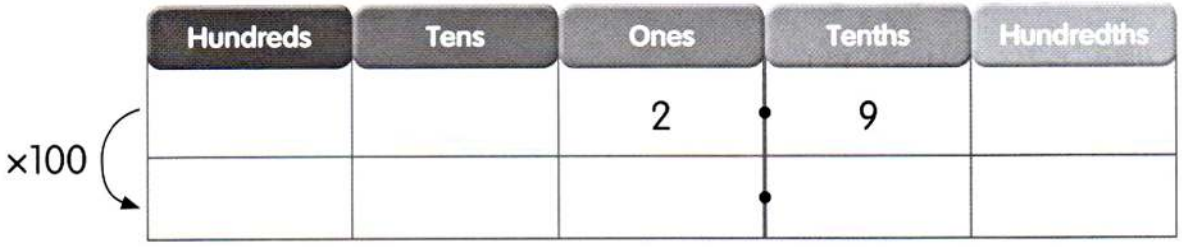
	Hundreds	Tens	Ones	Tenths	Hundredths
		6	0	4	
×10					

2 Multiply.

(a) $0.9 \times 10 =$ _____	**(b)** $0.05 \times 10 =$ _____
(c) $0.13 \times 10 =$ _____	**(d)** $0.287 \times 10 =$ _____
(e) $10.04 \times 10 =$ _____	**(f)** $33.468 \times 10 =$ _____

3 Multiply.

(a)



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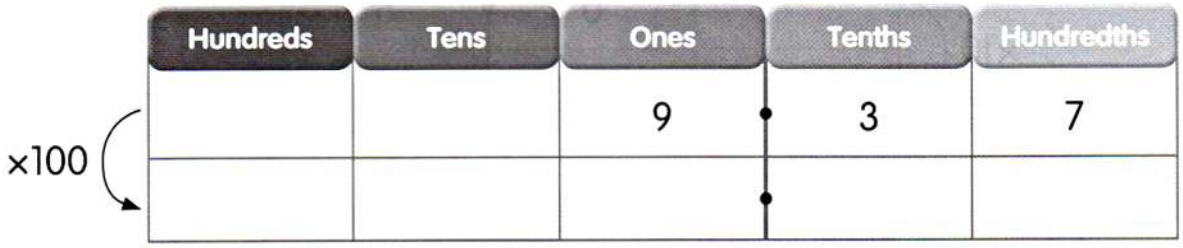

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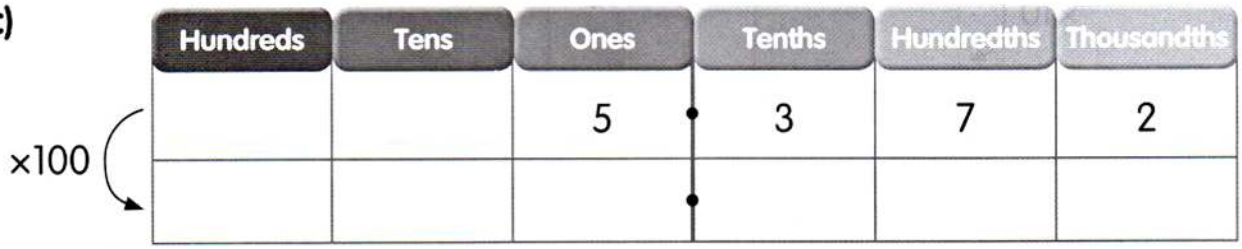


4 Multiply.

(a) $0.9 \times 100 =$ _____	**(b)** $0.08 \times 100 =$ _____
(c) $4.4 \times 100 =$ _____	**(d)** $65.6 \times 100 =$ _____
(e) $20.07 \times 100 =$ _____	**(f)** $0.057 \times 100 =$ _____

Name: Class: Date:

Multiplying by 10, 100 and 1000

L1 Worksheet 1

1 Multiply.

(a)

×10

Tens	Ones	Tenths	Hundredths	Thousandths
	0	6	2	1

(b)

×10

Tens	Ones	Tenths	Hundredths	Thousandths
	1	2	5	

(c)

×10

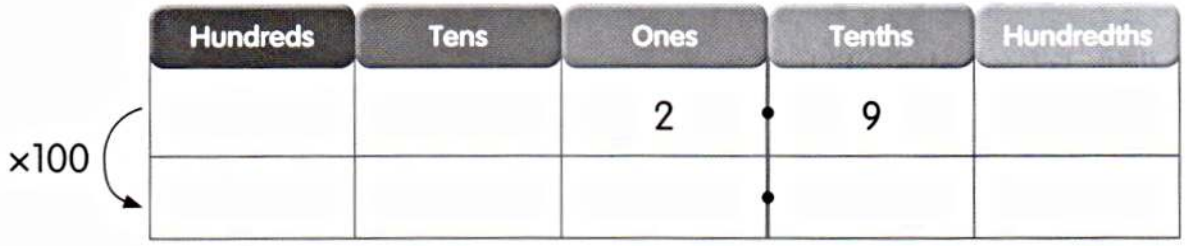
Hundreds	Tens	Ones	Tenths	Hundredths
	6	0	4	

2 Multiply.

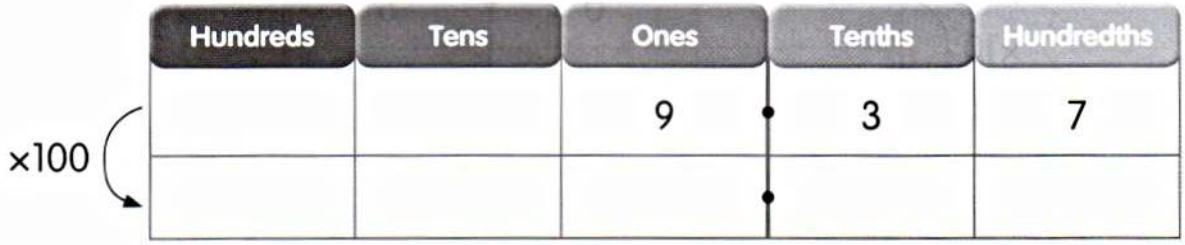
(a) $0.9 \times 10 =$ _____	**(b)** $0.05 \times 10 =$ _____
(c) $0.13 \times 10 =$ _____	**(d)** $0.287 \times 10 =$ _____
(e) $10.04 \times 10 =$ _____	**(f)** $33.468 \times 10 =$ _____

3 Multiply.

(a)



(b)



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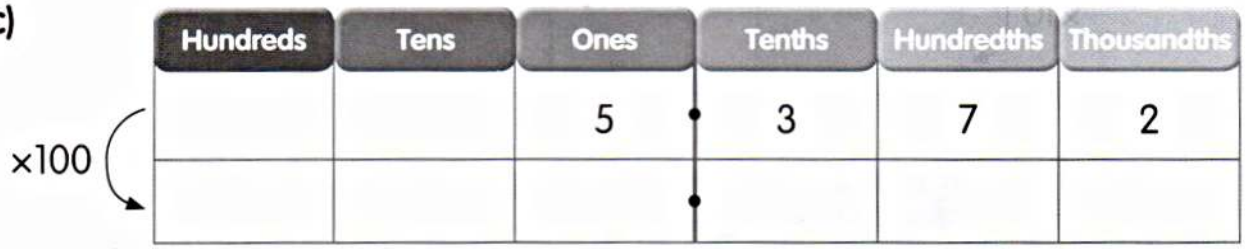


4 Multiply.

(a) $0.9 \times 100 =$ _____	**(b)** $0.08 \times 100 =$ _____
(c) $4.4 \times 100 =$ _____	**(d)** $65.6 \times 100 =$ _____
(e) $20.07 \times 100 =$ _____	**(f)** $0.057 \times 100 =$ _____

5 Multiply.

(a)

×1000

Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths
		0	7	5	3

(b)

×1000

Thousands	Hundreds	Tens	Ones	Tenths	Hundredths
			4	6	

(c)

×1000

Thousands	Hundreds	Tens	Ones	Tenths	Hundredths
			2	0	9

6 Multiply.

(a) $0.5 \times 1000 =$ _____	**(b)** $0.28 \times 1000 =$ _____
(c) $1.4 \times 1000 =$ _____	**(d)** $2.303 \times 1000 =$ _____
(e) $16.48 \times 1000 =$ _____	**(f)** $25.743 \times 1000 =$ _____

7 Fill in the missing numbers.

(a) $0.35 \times \_\_\_\_\_ = 350$

(b) $4.9 \times \_\_\_\_\_ = 490$

(c) $0.1 \times \_\_\_\_\_ = 10$

(d) $82.5 \times \_\_\_\_\_ = 825$

(e) $463.28 \times \_\_\_\_\_ = 46\,328$

(f) $34.008 \times \_\_\_\_\_ = 34\,008$

(g) $\_\_\_\_\_ \times 2.674 = 2674$

(h) $\_\_\_\_\_ \times 57.92 = 5792$

(i) $\_\_\_\_\_ \times 230.01 = 2300.1$

(j) $\_\_\_\_\_ \times 90.086 = 90\,086$

Name: Class: Date:

Multiplying by Tens, Hundreds and Thousands

L2 Worksheet 2

1 Multiply.

(a) $0.3 \times 30 =$ _____	**(b)** $0.06 \times 80 =$ _____
(c) $1.6 \times 70 =$ _____	**(d)** $2.05 \times 50 =$ _____
(e) $7.36 \times 40 =$ _____	**(f)** $6.094 \times 60 =$ _____

2 Multiply.

(a) $0.436 \times 400 =$ _____	**(b)** $2.02 \times 300 =$ _____
(c) $0.27 \times 500 =$ _____	**(d)** $31.4 \times 600 =$ _____
(e) $1.006 \times 700 =$ _____	**(f)** $51.28 \times 900 =$ _____

3 Multiply.

(a) $0.35 \times 3000 =$ _____	**(b)** $6.8 \times 2000 =$ _____
(c) $2.005 \times 5000 =$ _____	**(d)** $8.12 \times 8000 =$ _____
(e) $9.27 \times 4000 =$ _____	**(f)** $7.3 \times 9000 =$ _____

4. An eraser cost $0.35. What is the total cost of 100 such erasers?

5. Siti has 50 pieces of ribbons. Each piece of ribbon is 1.8 m long. What is the total length of the 50 pieces of ribbons in metres?

6. A can contains 0.425 ℓ of soft drink. 30 similar cans of soft drink are poured into a large container. What is the total volume of drink in the container in litres?

7. The cost of 1 book is $9.85. Find the total cost of 4000 such books.

Name: Class: Date:

Dividing by 10, 100 and 1000

L1 Worksheet 3

1 Divide.

(a)

	Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths
		1	0	0	1	
÷10						

(b)

	Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths
	2	4	6	8		
÷10						

(c)

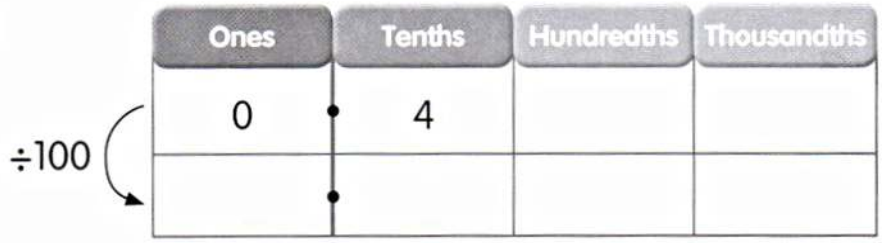
	Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths
	3	5	9	0	3	
÷10						

2 Divide.

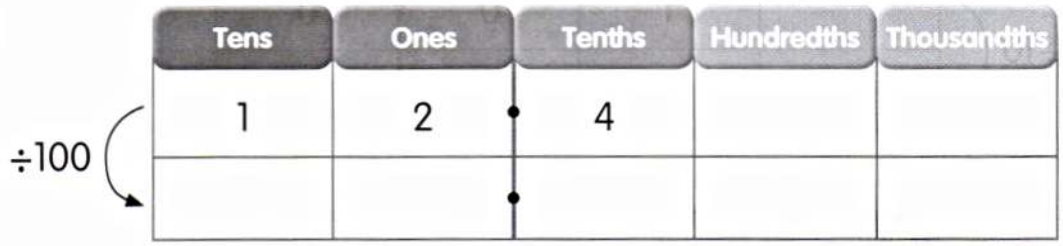
(a) 0.8 ÷ 10 = _____	**(b)** 0.04 ÷ 10 = _____
(c) 0.15 ÷ 10 = _____	**(d)** 1.69 ÷ 10 = _____
(e) 25.03 ÷ 10 = _____	**(f)** 752.49 ÷ 10 = _____

3 Divide.

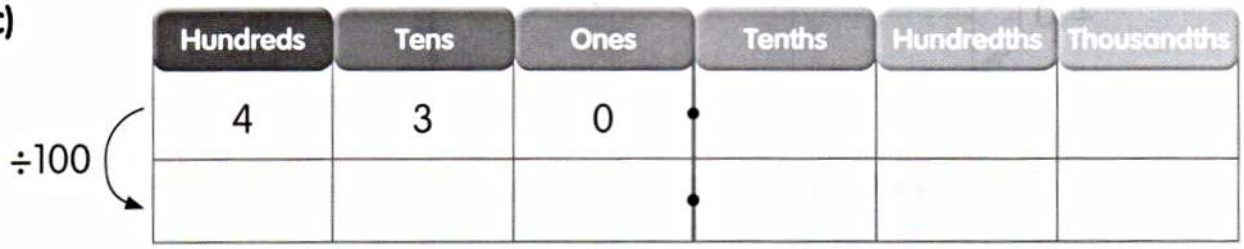
(a)



(b)



(c)



4 Divide.

(a) $8.1 \div 100 =$ _____	**(b)** $16.4 \div 100 =$ _____
(c) $328 \div 100 =$ _____	**(d)** $220.1 \div 100 =$ _____
(e) $7940 \div 100 =$ _____	**(f)** $2600.9 \div 100 =$ _____

5 Divide.

(a)

÷1000

Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths
	1	7			

(b)

÷1000

Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths
2	5	3			

(c)

÷1000

Thousands	Hundreds	Tens	Ones	Tenths	Hundredths
8	4	2	0		

6 Divide.

(a) 4 ÷ 1000 = _____	**(b)** 15 ÷ 1000 = _____
(c) 206 ÷ 1000 = _____	**(d)** 3297 ÷ 1000 = _____
(e) 16 483 ÷ 1000 = _____	**(f)** 436 012 ÷ 1000 = _____

7 Fill in the missing numbers.

(a) 407 ÷ _____ = 4.07

(b) 35.04 ÷ _____ = 3.504

(c) 2700 ÷ _____ = 2.7

(d) 57.8 ÷ _____ = 0.578

(e) 120.86 ÷ _____ = 12.086

(f) 138.9 ÷ _____ = 1.389

(g) 36 084 ÷ _____ = 36.084

(h) 6203.42 ÷ _____ = 620.342

(i) 72 904 ÷ _____ = 729.04

(j) 128 900 ÷ _____ = 128.9

Name: Class: Date:

Dividing by Tens, Hundreds and Thousands

L2 Worksheet 4

1 Divide.

(a) $0.3 \div 30 =$ _____	**(b)** $0.74 \div 20 =$ _____
(c) $1.2 \div 40 =$ _____	**(d)** $6.54 \div 60 =$ _____
(e) $10.32 \div 80 =$ _____	**(f)** $11.07 \div 90 =$ _____

2 Divide.

(a) 39 ÷ 300 = _____	**(b)** 276 ÷ 400 = _____
(c) 0.2 ÷ 200 = _____	**(d)** 575 ÷ 500 = _____
(e) 824 ÷ 800 = _____	**(f)** 36 ÷ 900 = _____

3 Divide.

(a) $4 \div 2000 =$ _____	**(b)** $36 \div 9000 =$ _____
(c) $832 \div 4000 =$ _____	**(d)** $1078 \div 7000 =$ _____
(e) $4566 \div 6000 =$ _____	**(f)** $1150 \div 5000 =$ _____

4. 200 identical bricks have a total mass of 570 kg. What is the mass of 1 brick in kilograms?

5. A ball of string, 39.6 m long, was cut into 30 equal pieces. Find the length of each piece of string in metres.

6. 5000 people bought tickets to watch a concert. The price of each ticket was the same. The total amount collected from the 5000 tickets was $225 000. Find the price of each ticket.

Name: Class: Date:

Measurement Conversions

LI Worksheet 5

1. Convert.

(a) 82 m = _____ cm	**(b)** 12.5 m = _____ cm
(c) 0.46 m = _____ cm	**(d)** 13.5 km = _____ m
(e) 1.96 km = _____ m	**(f)** 10.06 km = _____ m

2 Convert.

(a) 0.951 ℓ = _____ ml	**(b)** 5.7 ℓ = _____ ml
(c) 17.45 ℓ = _____ ml	**(d)** 0.201 kg = _____ g
(e) 1.1 kg = _____ g	**(f)** 15.18 kg = _____ g

3 Convert.

(a) 2 cm = _____ m	**(b)** 16 cm = _____ m
(c) 184 cm = _____ m	**(d)** 14 m = _____ km
(e) 258 m = _____ km	**(f)** 33 003 m = _____ km

4 Convert.

(a) 56 ml = _____ ℓ	**(b)** 703 ml = _____ ℓ
(c) 4729 ml = _____ ℓ	**(d)** 615 g = _____ kg
(e) 8028 g = _____ kg	**(f)** 98 732 g = _____ kg

Name: **Class:** **Date:**

Worksheet 6

1 Convert each measurement to a decimal.

(a) 10 m 5 cm = _____ m	**(b)** 35 m 12 cm = _____ m
(c) 9 km 800 m = _____ km	**(d)** 15 km 65m = _____ km
(e) 5 ℓ 300 ml = _____ ℓ	**(f)** 23 kg 25 g = _____ kg

2 Convert to metres and centimetres.

(a) 8.05 m = _____ m _____ cm	**(b)** 26.38 m = _____ m _____ cm

3 Convert to kilometres and metres.

(a) 12.6 km = _____ km _____ m	**(b)** 45.152 km = _____ km _____ m

4 Fill in the blanks.

(a) 18.205 kg = _____ kg _____ g

(b) 36.18 ℓ = _____ ℓ _____ ml

(c) 105.475 ℓ = _____ ℓ _____ ml

Name: Class: Date:

Word Problems

Worksheet 7

Solve the word problems. Check if each answer is reasonable.

1. Rope A is 2.4 m long. Rope B is 0.85 m longer than Rope A. What is the length of Rope B?

2. Janice bought a dress and paid the cashier with a $100 note. She received $38.10 change. How much did the dress cost?

3. 15 identical cans of milk powder weigh 20.4 kg altogether. What is the mass of 1 can of milk powder?

4 Ravi collects cards of cartoon heroes. The cost of each card is $0.75. Ravi wants to buy 34 such cards. How much will he have to pay for the cards altogether?

5 The length of a rectangle is 42.8 cm. The breadth of the rectangle is 23 cm. What is the area of the rectangle?

6 $7945 is shared equally among 28 people. How much does each person get?

Name: **Class:** **Date:**

L2 Worksheet 8

Solve the word problems. Check if each answer is reasonable.

1. The mass of a packet of tissue paper is 14.5 g. What is the total mass of 168 such packets of tissue paper? Give the answer in kilograms.

2. A container had 14 525 ml of water at first. Some of its water was poured equally into 19 identical bottles. Then there was 0.75 ℓ of water left in the container. What was the volume of water in each bottle?
Give the answer in litres.

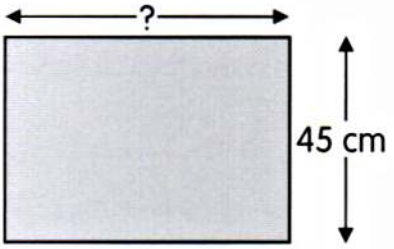
3 At first, Mrs Tham had 20 packets of sugar, each with a mass of 5.25 kg. She then packed all the sugar into smaller packets of 3 kg each. How many smaller packets of sugar did she have?

4 The sum of two numbers is 112.5. The greater number is 5 times the smaller number. Find the two numbers.

5 A flask contained 4 times as much water as a jug at first. After 1.05 ℓ of water were poured from the flask into the jug, both containers had the same amount of water. How many litres of water are there in the jug now?

6 A sling bag costs $35.60 and a haversack costs $42.70. Find the total cost of 3 such sling bags and 8 such haversacks.

7 Siti bent a piece of wire 2.1 m long into a rectangle. The breadth of the rectangle is 45 cm long. What is the length of the rectangle in centimetres?

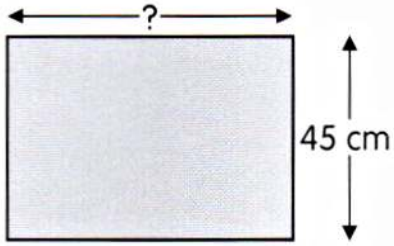


8 A pair of boots costs $38.50 more than a pair of shoes and 5 times as much as a pair of sandals. The total cost of 4 such pairs of sandals is $44.80. Find the cost of the pair of shoes.

5 A flask contained 4 times as much water as a jug at first. After 1.05 ℓ of water were poured from the flask into the jug, both containers had the same amount of water. How many litres of water are there in the jug now?

6 A sling bag costs $35.60 and a haversack costs $42.70. Find the total cost of 3 such sling bags and 8 such haversacks.

7 Siti bent a piece of wire 2.1 m long into a rectangle. The breadth of the rectangle is 45 cm long. What is the length of the rectangle in centimetres?



8 A pair of boots costs $38.50 more than a pair of shoes and 5 times as much as a pair of sandals. The total cost of 4 such pairs of sandals is $44.80. Find the cost of the pair of shoes.

Name: **Class:** **Date:**

L3 Worksheet 9

Solve the word problems. Check if each answer is reasonable.

1. The total mass of Faizal, John and Raju is 154.2 kg. John is 10.48 kg heavier than Raju and 9.23 kg heavier than Faizal. Find Raju's mass.

2 The total mass of Alice and Bernice is 90.45 kg. The total mass of Alice and Mei Ling is 61.2 kg. Bernice is 4 times as heavy as Mei Ling. What is Alice's mass?

3 Janice saved $0.40 every day from Monday to Friday. She saved $1.00 each on Saturday and Sunday. Starting from Monday, how many days did she take to save $30?

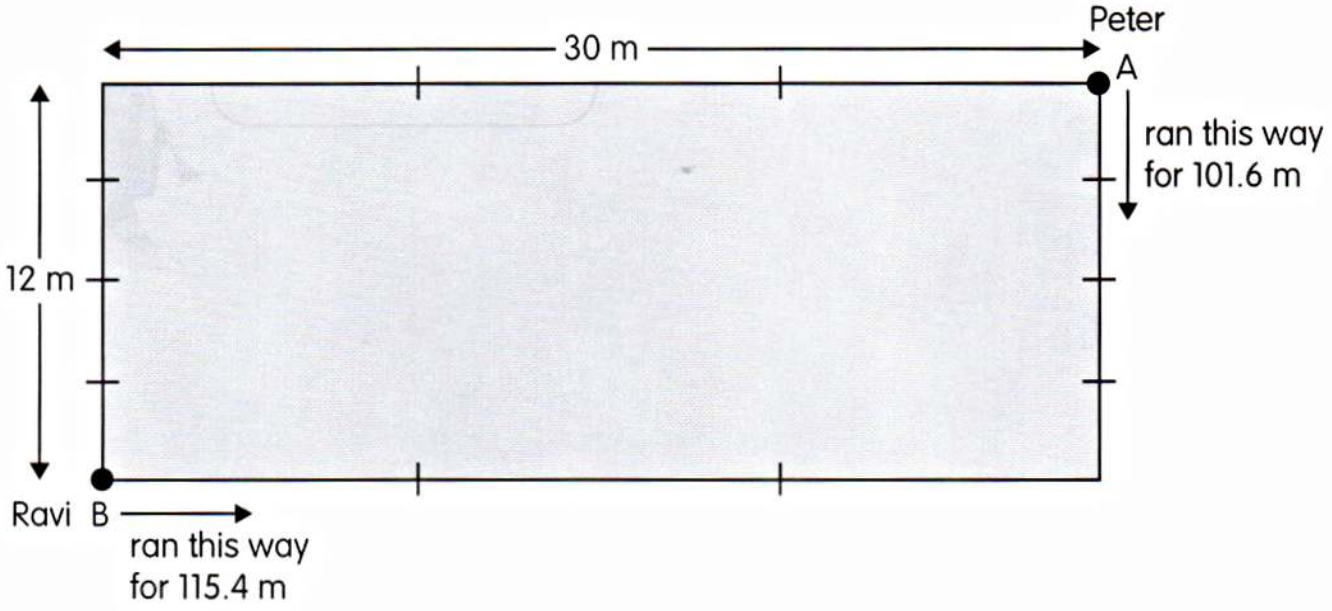
4 Sanjeet paid $32.85 for a file and 3 identical pens. Leon paid $83.50 for 2 such files and 8 such pens. Find the cost of 1 pen.

Name: **Class:** **Date:**

Performance Task

Activity: Use the idea of perimeter to identify locations and find the distance between two positions.

The diagram below shows a rectangular field that measures 30 m by 12 m. Peter ran from Point A and Ravi ran from Point B along the perimeter of the field in the directions shown.



Peter ran 101.6 m and Ravi ran 115.4 m.

(a) Mark on the diagram to show the locations of the field where Peter and Ravi stopped running.

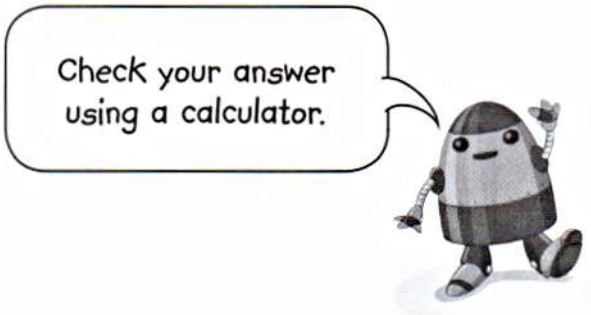
(b) Find the shorter distance between the locations where Peter and Ravi stopped running.

Problem Solving

Raymond wanted to buy 8 T-shirts but he was short of $8.10. Instead he bought 5 T-shirts and had $12.60 left. How much would he need to pay for 20 T-shirts?

- Do you understand the problem?
- What is your plan?
- Show how you solve the problem.
- Remember to check your solution.

Plan



Solve

Check

Math Journal

Without using a calculator, Peter worked out $0.2 \times 0.3 = 0.6$.
His explanation is shown below.

> $2 \times 3 = 6$
> Since both 0.2 and 0.3 are tenths, the answer is 0.6.

Peter's explanation and answer are incorrect. Show and explain how you can obtain the correct answer without using a calculator.

Name: Class: Date:

8 Rate

Finding Rates

L1 Worksheet 1

Solve the word problems.

1. The cost of carpeting a room of area 20 m^2 is \$380. What is the cost of carpeting one square metre of a room?

2. A car uses 25 ℓ of petrol to travel 280 km. What is the rate of petrol usage in kilometres per litre?

3 Mr Tan paid $7.50 for parking his car at a shopping mall for 3 h. Find the rate of parking in dollars per hour.

4 Rani types 75 words in 5 minutes. What is the rate of typing in words per minute?

5 A photocopier can copy 45 pages in 3 minutes. What is the rate of photocopying in pages per minute?

6 A man is paid $87 for 6 hours of work. What is the rate of payment per hour?

7. Group tickets for a concert are sold at $105 for 10 tickets. What is the price per ticket?

8. A drainage pipe can drain 88 ℓ of water in 5 minutes. At what rate can the pipe drain water in litres per minute?

Name: Class: Date:

Finding Total Amount

LI Worksheet 2

Solve the word problems.

1. A pipe drains 840 ℓ of water from a tank in 30 minutes.
   (a) How many litres of water does it drain in 1 minute?
   (b) How many litres of water does it drain in 4 minutes?

2. A factory produces 2865 chairs in 5 days.
   (a) How many chairs does the factory produce in 1 day?
   (b) How many chairs does the factory produce in 11 days?

3 A printer can print 160 copies of the same document in 80 seconds.

(a) How many copies of the same document can it print in 1 second?
(b) How many copies of the same document can it print in 1 minute?

4 Mrs Tay needs to use 10 eggs for every 700 g of flour to bake cakes.
How much flour is needed if Mrs Tay uses 15 eggs to bake cakes?
Give your answer in grams.

Name: **Class:** **Date:**

L2 Worksheet 3

Solve the word problems.

1. The table shows the parking charges at a car park.

Parking Charges	
For the first hour or part thereof	\$1.50
For every additional $\frac{1}{2}$ hour or part thereof	\$1.00

Mr Mohammad parked his car from 8.00 a.m. to 11.30 a.m.
How much did he have to pay?

2 The table shows the rental rates for bicycles.

Bicycle Rental Rates	
For the first hour	$2.00
For every additional $\frac{1}{2}$ hour	$0.90

Jack wants to rent a bicycle from 2.30 p.m. to 5.00 p.m.
How much will he have to pay?

3 The table shows the postage rates for delivering parcels of different masses in a certain town.

Mass step up to	Postage charge
50 g	$0.80
100 g	$1.50
200 g	$2.50

Siti wants to send a parcel of mass 130 g and 2 parcels of mass 80 g each to 3 different addresses in the town. How much does she need to pay in all?

4 Mr Kumar earns $60 a day. If he works overtime, he earns an additional $5 per hour. He works for 5 days and for each day, he works 3 h overtime. How much is he paid in total?

Name: Class: Date:

Finding Number of Units

Worksheet 4

Solve the word problems.

1. Mrs Seah will receive $112 for 8 hours of work. How many hours does she have to work to receive $168?

2. A machine makes 750 bottles in 15 minutes. How long will it take the machine to make 1000 bottles?

3 The cost of tiling 16 m^2 of floor is \$368. Mr Ho paid \$644 for tiling his room. What is the floor area of his room?

4 Cherries were sold at \$0.85 per 100 g at a fruit stall. Mrs Tay paid \$21.25 for some cherries. How many kilograms of cherries did she buy?

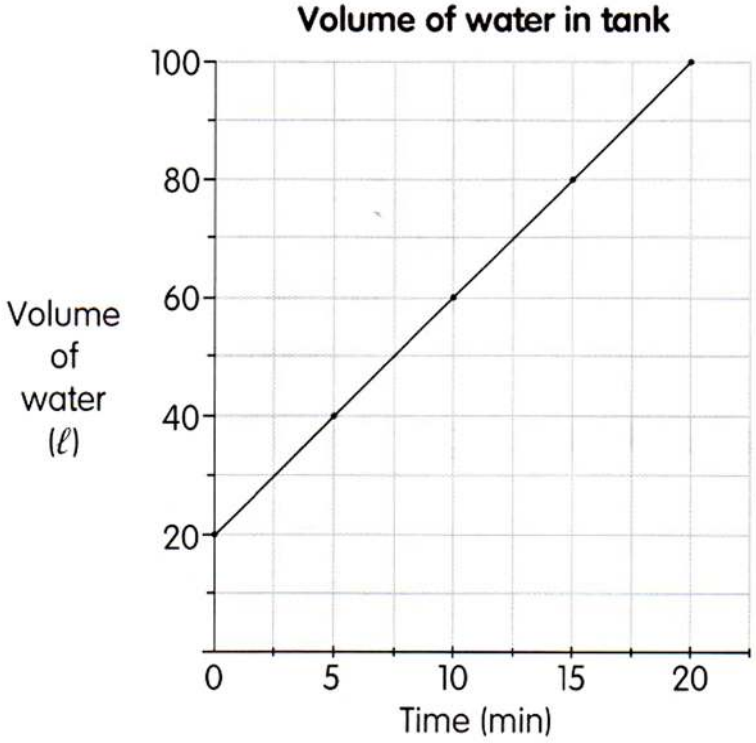
Name: Class: Date:

Word Problems

L2 Worksheet 5

Solve the word problems.

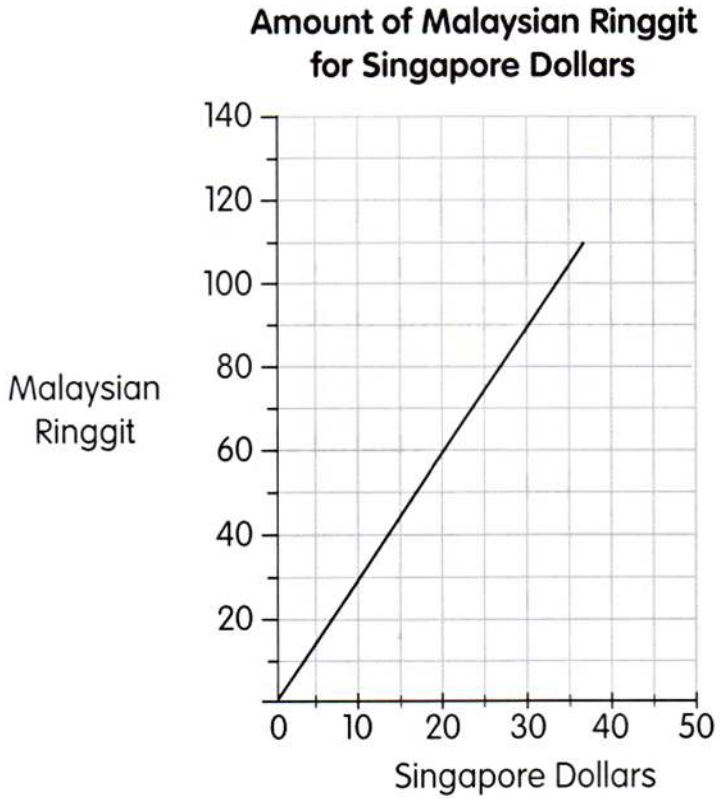
1. A rectangular tank was partially filled with water at first. A tap was then turned on for 20 min to fill the tank completely before it was turned off. The line graph shows the volume of water in the tank at 5-minute intervals up to 20 min.



(a) What was the rate of flow of water from the tap in litres per minute?

(b) How many minutes did it take to add 40 ℓ of water to the tank?

2 The line graph shows each amount of Malaysian ringgit that can be exchanged for a certain amount of Singapore dollars.



(a) How many Malaysian ringgit can be exchanged for 1 Singapore dollar?

(b) How many Malaysian ringgit can be exchanged for 20 Singapore dollars?

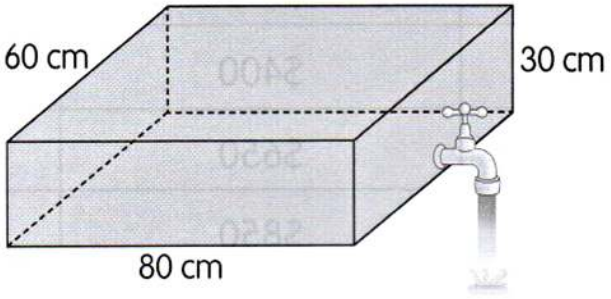
(c) How many Singapore dollars can be exchanged for 90 Malaysian ringgit?

3 The table shows the rates for a cruise to Bali.

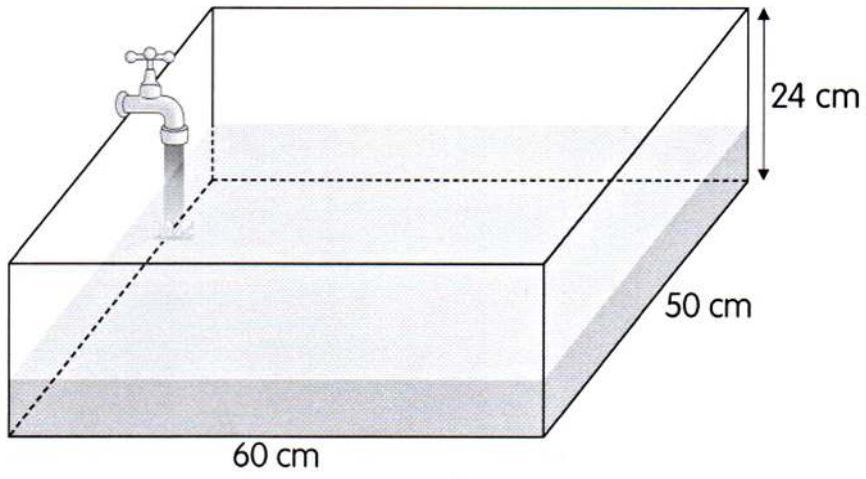
Cruise to Bali		
Room Package	**Adult** (price per person)	**Child below 12 years** (price per person)
Standard	$400	$230
Deluxe	$650	$260
Premium	$850	$380

Mr Raj, his wife and two children aged ten and eleven went on a cruise to Bali. He chose a Deluxe Room Package for his family. How much did he have to pay?

4 A rectangular tank measuring 80 cm by 60 cm by 30 cm is completely filled with water. A tap was turned on to drain water from the tank at a rate of 9 ℓ per minute. How long did it take to drain $\frac{3}{4}$ the amount of water from the tank?



5 A rectangular tank 60 cm long, 50 cm wide and 24 cm high was $\frac{1}{3}$ filled with water at first. A tap was then turned on to completely fill the tank. The rate of water flowing from the tap into the tank was 3 ℓ per minute. How long did it take to fill the tank completely? Give your answer in minutes.



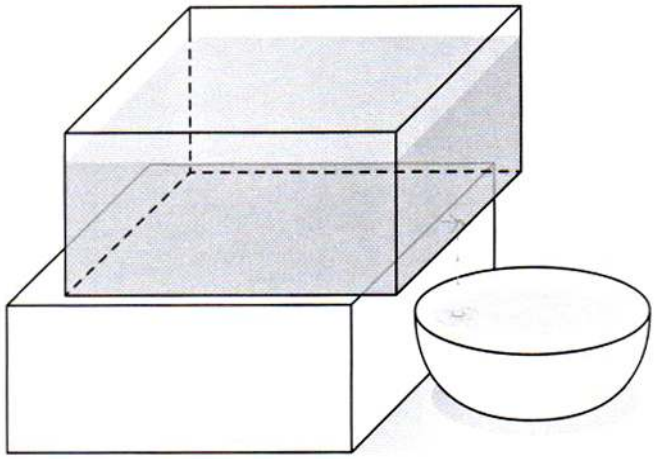
6 At a supermarket, apples were sold at 5 for $2 and 10 for $3.50. Mrs Teo bought 55 apples. What was the least amount she needed to pay for the apples altogether?

Name: **Class:** **Date:**

L3 Worksheet 6

Solve the word problems.

1. Water started to leak from a full container of water at 9.10 a.m. A basin was placed below the container to collect the water. At 9.30 a.m., 3.3 ℓ of water were collected. It took 50 min to empty the water in the container. What was the capacity of the container?
Give your answer in litres and millilitres.



2 In a factory, a machine dispenses 2 ℓ of fruit juice to fill a bottle each time. The machine can dispense fruit juice to fill 1400 bottles per minute. How many litres of fruit juice can it dispense in 5 hours?

Name: **Class:** **Date:**

Performance Task

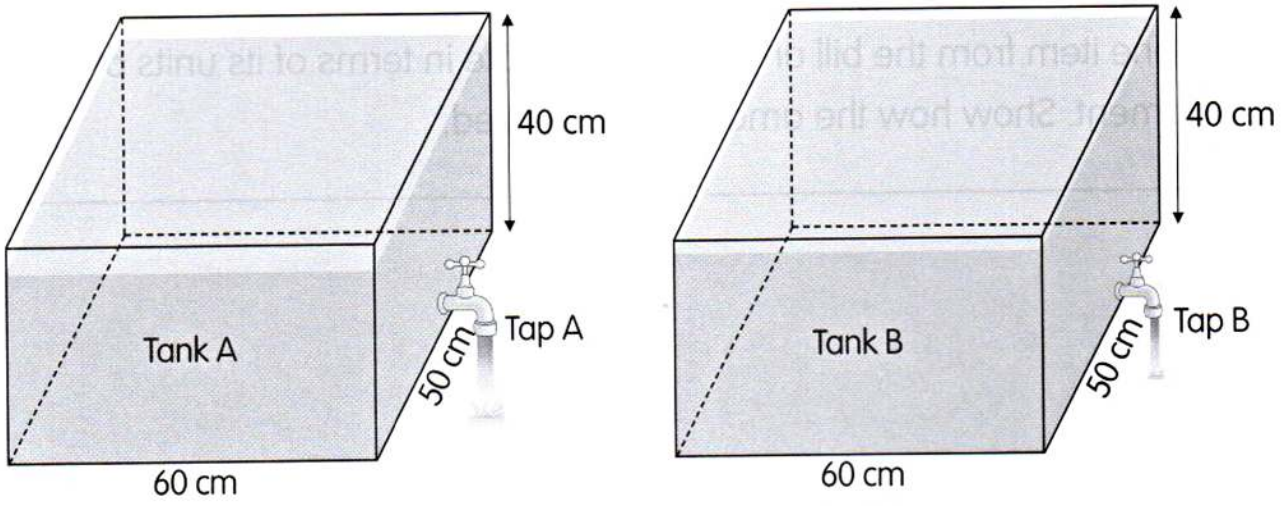
Activity: To calculate total amount based on a given rate and units of usage.

Work in pairs.
Paste a copy of a PUB bill or a mobile phone bill in the space below.

Choose one item from the bill and explain the rate in terms of its units of measurement. Show how the amount is calculated.

Problem Solving

Two identical rectangular tanks, A and B, are completely filled with water. Each tank measures 60 cm by 50 cm by 40 cm. When Tap A is turned on, water is drained from the tank at a rate of 3 ℓ per minute. When Tap B is turned on, water is drained from the tank at a rate of 2 ℓ per minute. Both taps are turned on at the same time. Find the difference in the time taken for both tanks to be drained of all the water.



- Do you understand the problem?
- What is your plan?
- Show how you solve the problem.
- Remember to check your solution.

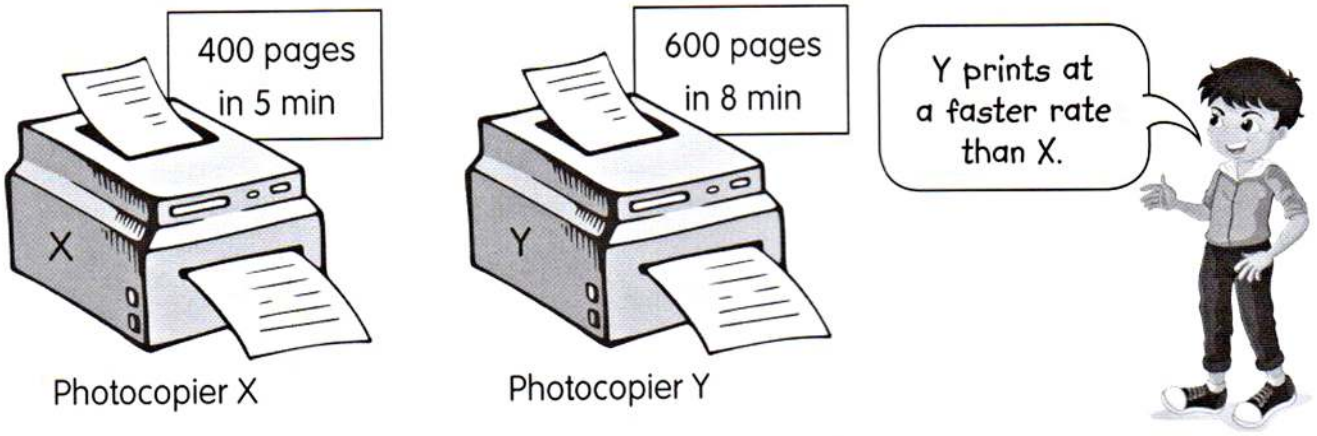
Plan

Solve

Check

Math Journal

The advertisement shows the rate of printing of two photocopiers, X and Y.



Peter's explanation:
X can print 400 pages in 5 min. Y can print 600 pages in 8 min.
With 3 more minutes, Y can print 200 pages more than X.
So, Y prints at a faster rate than X.

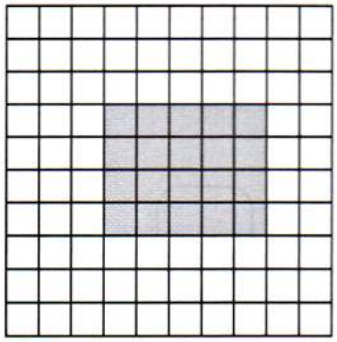
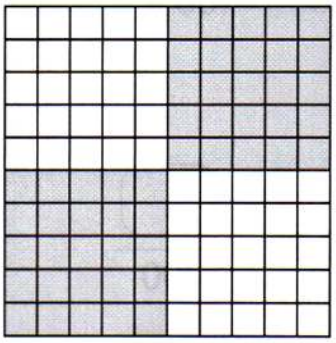
Is Peter's reasoning correct?
Show him how you would compare the rates to find out if X or Y prints at a faster rate.

Name: Class: Date:

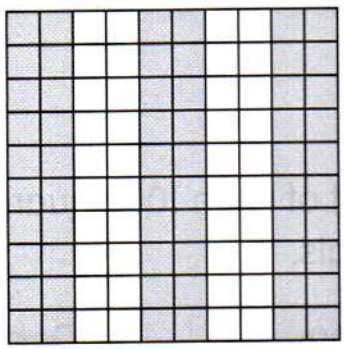
9 Percentage

Recall (Parts of a whole)

1 Express the shaded part and unshaded part of each 100-square grid as fractions in the simplest form and as decimals.

Figure	Fraction	Decimal
(a) 	shaded part: $\frac{\square}{100} = \frac{\square}{\square}$	shaded part:
	unshaded part: $\frac{\square}{100} = \frac{\square}{\square}$	unshaded part:
(b) 	shaded part: $\frac{\square}{100} = \frac{\square}{\square}$	shaded part:
	unshaded part: $\frac{\square}{\square} = \frac{\square}{\square}$	unshaded part:

2 Express the shaded part and unshaded part as fractions in the simplest form and as decimals.

Figure	Fraction	Decimal
	shaded part:	shaded part:
	unshaded part:	unshaded part:

3 Fill in the missing numbers.

(a) $\frac{3}{4} = \frac{\square}{100}$

(b) $\frac{7}{20} = \frac{\square}{100}$

(c) $\frac{23}{25} = \frac{\square}{100}$

(d) $\frac{31}{50} = \frac{\square}{100}$

(e) $\frac{4}{5} = \frac{\square}{100}$

(f) $\frac{9}{10} = \frac{\square}{100}$

4 Fill in the missing numbers.

(a) $0.7 = \frac{\square}{100}$

(b) $0.29 = \frac{\square}{100}$

(c) $0.08 = \frac{\square}{100}$

(d) $0.73 = \frac{\square}{100}$

(e) $0.01 = \frac{\square}{100}$

(f) $0.96 = \frac{\square}{100}$

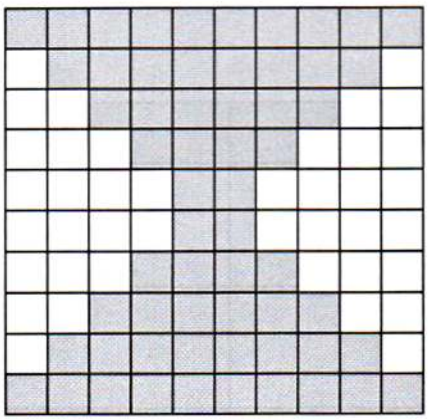
Name: Class: Date:

Meaning of Percent

L1 Worksheet 1

1. Each figure shows a 100-square grid. Express the shaded part and unshaded part as percentages.

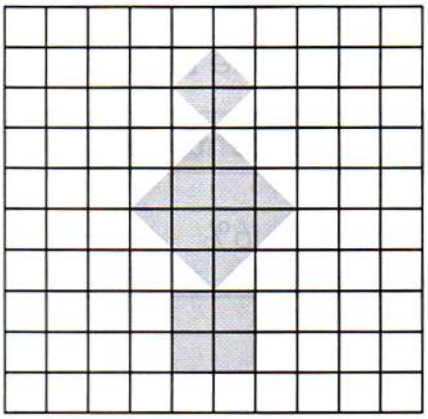
(a)



_____% of the whole is shaded.

_____% of the whole is **not** shaded.

(b)

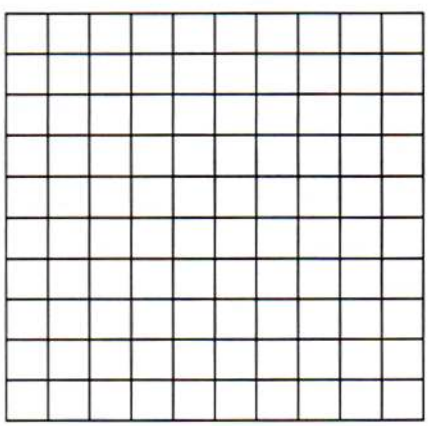


_____% of the whole is shaded.

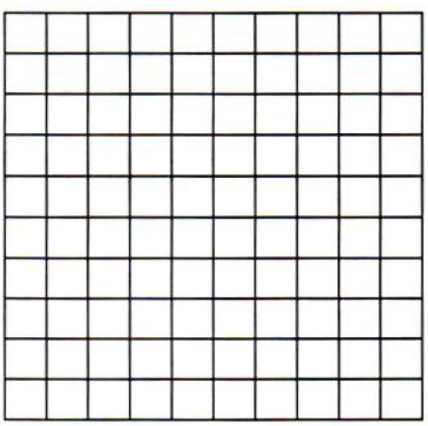
_____% of the whole is **not** shaded.

2. Shade the correct number of squares in the grid to show the given percentage.

(a) Shade 9% of the whole.



(b) Shade 73% of the whole.



3 Fill in the blanks.

(a) 85 out of 100 = _____%

(b) 34 out of 100 = _____%

(c) _____ out of 100 = 52%

(d) 26 out of _____ = 26%

(e) 19 out of _____ = 19%

(f) _____ out of 100 = 73%

4 Complete the table.

Percentage	Fraction	Decimal
6%	$\frac{6}{100}$ or $\frac{3}{50}$	0.06
	$\frac{33}{100}$	
90%		
		0.18
84%		

5 Mrs Lim has 100 muffins. 42 of them are chocolate muffins. What percentage of the muffins are chocolate muffins?

_____ of the muffins are chocolate muffins.

Name: Class: Date:

Conversions between Fractions, Decimals and Percentages

Worksheet 2

1 Express each fraction as a percentage.

(a) $\frac{2}{10} =$	(b) $\frac{10}{10} =$
(c) $\frac{1}{2} =$	(d) $\frac{4}{5} =$
(e) $\frac{12}{25} =$	(f) $\frac{9}{20} =$
(g) $\frac{33}{50} =$	(h) $\frac{78}{200} =$
(i) $\frac{32}{40} =$	(j) $\frac{100}{125} =$

2 Express each decimal as a percentage.

(a) 0.58 =	**(b)** 0.02 =
(c) 0.4 =	**(d)** 0.63 =
(e) 0.19 =	**(f)** 0.89 =

3 Express each percentage as a fraction in its simplest form.

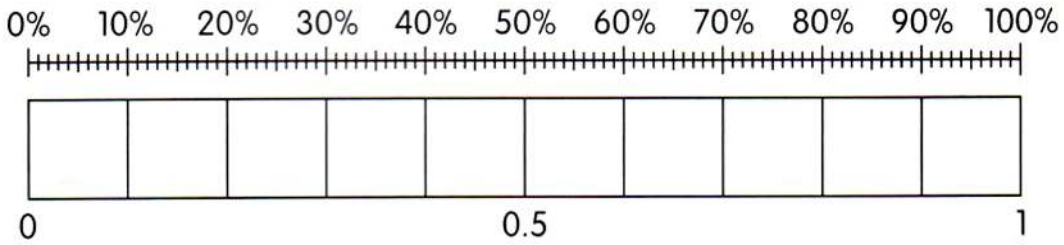
(a) 15% =	**(b)** 4% =
(c) 20% =	**(d)** 5% =
(e) 36% =	**(f)** 88% =

4 Express each percentage as a decimal.

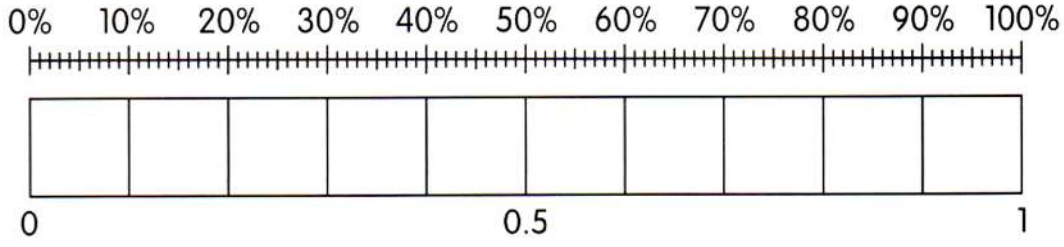
(a) 3% =	**(b)** 77% =
(c) 90% =	**(d)** 49% =

5 Colour the parts to show each percentage. Express each percentage as a fraction and a decimal.

(a) 30% = _____ = _____
(fraction) (decimal)



(b) 7% = _____ = _____
(fraction) (decimal)



6 Draw lines to match each equivalent percentage, fraction and decimal.

Percentage	Fraction	Decimal
25%	$\frac{2}{5}$	0.12
40%	$\frac{1}{4}$	0.40
80%	$\frac{3}{25}$	0.35
12%	$\frac{7}{20}$	0.25
10%	$\frac{4}{5}$	0.80
35%	$\frac{1}{10}$	0.1

Name: Class: Date:

Percentage of a Quantity

LI Worksheet 3

1. Find the value of each of the following.

(a) 80% of 500 g	**(b)** 25% of \$6000
(c) 37% of 1000 km	**(d)** 18% of 1200 ℓ
(e) 32% of 200 kg	**(f)** 45% of 1800 g
(g) 4% of 300 marks	**(h)** 90% of 400 points

2 Find the value of the following.

(a) What percentage of 100 is 78?

(b) What percentage of 200 is 40?

(c) What percentage of $320 is $80?

(d) What percentage of 2000 ml is 600 ml?

(e) What percentage of 4000 kg is 2500 kg?

Name: **Class:** **Date:**

Worksheet 4

Solve the word problems.

1. Broadroad Primary School has 800 pupils. 15% of the pupils walk to school. How many pupils walk to school?

2. Mr Teo has 150 tarts for sale. 38% of the tarts are pineapple tarts. How many pineapple tarts are there?

3. 500 people took part in a walkathon. 46% of them were women. How many women took part in the walkathon?

4 In a survey involving 200 families, it is found that 52% of them have more than one child. How many families have more than one child?

5 A pole was 180 cm long. Siti painted 36 cm of the pole red. What percentage of the pole was painted red?

6 There were 50 questions in a Mathematics test. Ravi answered 44 of the questions correctly. What percentage of the questions did Ravi answer correctly?

Name: Class: Date:

Word Problems

Solve the word problems.

1. Janice had $10. She spent $2 on an ice cream.
   (a) What percentage of her money did Janice spend on the ice cream?
   (b) What percentage of her money did she have left?

2. 850 people took part in a marathon. 42% of them were women and the rest were men.
   (a) How many of the participants were women?
   (b) How many men took part in the marathon?

3 A baker sold 400 egg tarts, peach tarts and chocolate tarts altogether. He sold 120 egg tarts. 50% of the tarts sold were chocolate tarts.

(a) What percentage of the tarts sold were egg tarts?

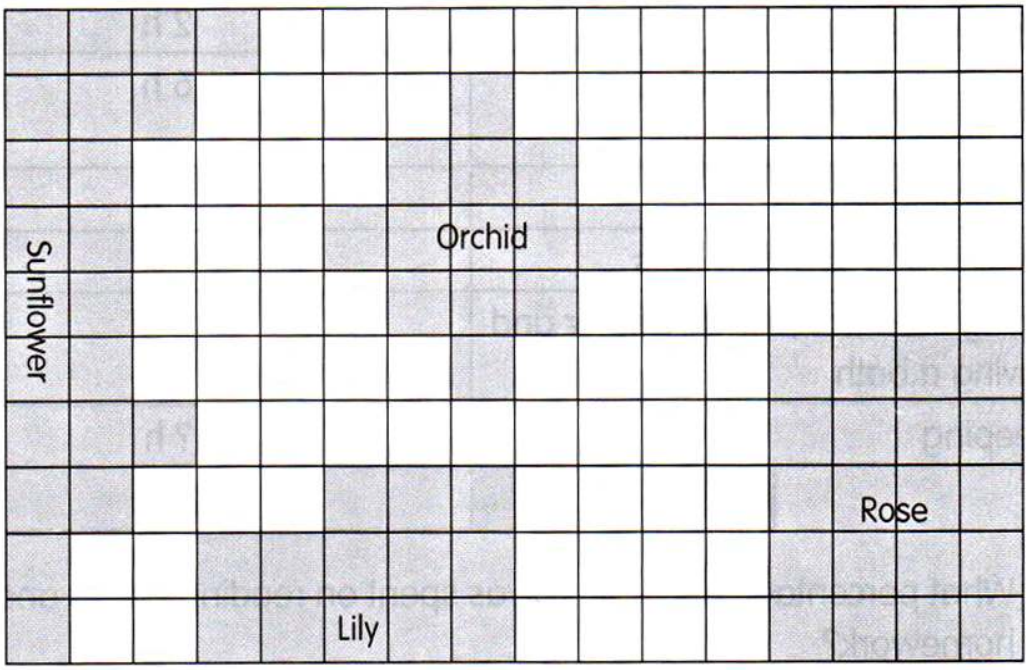
(b) What percentage of the tarts sold were peach tarts?

4 There are 240 buttons in a container. 30% of the buttons are red, 25% of them are yellow and the rest are blue.

(a) How many red buttons are there?

(b) How many blue buttons are there?

5 A garden is divided into 160 equal parts as represented in the grid below. What percentage of the garden is used to plant each type of flower?



Complete the table.

Type of flower	Percentage of garden used for each type of flower
Lily	
Orchid	
Rose	
Sunflower	

6 The table shows the activities Janice did in 24 hours on a Saturday.

Activity	Number of hours spent
Morning jog	2 h
Reading books and doing homework	6 h
Swimming lesson	2 h
Watching TV programmes	4 h
Eating breakfast, lunch, dinner and having a bath	2 h
Sleeping	? h
Total	24 h

(a) What percentage of her time was spent on reading books and doing homework?

(b) How many hours did she spend sleeping?

(c) What percentage of her time was spent sleeping?
Give the answer correct to 1 decimal place.

Name: **Class:** **Date:**

L2 Worksheet 6

Solve the word problems.

1. In a 5-km race, Siti completed 70% of the distance and Janice completed 65% of the distance. What was the difference between the distance ran by Siti and Janice? Give your answer in metres.

2. At a concert, 52% of the audience were children and 48% of them were adults. There were 600 people at the concert. How many more children than adults were there?

3 Mr Tan's monthly salary is $2400. In January, he spends 40% of it on the rental of an apartment and 30% on food and transport. He saves the rest. How much does he save in January?

4 Amiya has 160 blue, green, red and white beads altogether. The table shows how many beads of each colour she has. What percentage of the total number of beads are white beads?

Colour of beads	Number of beads
Blue	32
Green	48
Red	60
White	?

5 Alice and Bernice shared a sum of money. Alice's share was 4 times as much as Bernice's share. What percentage of the sum of money was Alice's share?

6 Ravi has 540 marbles. 35% of them are blue marbles, 80 of them are red and the rest are green. How many green marbles does he have?

7 Brian and Charlie share $450. Brian receives 30% of the money and Charlie receives 70% of it. How much less money does Brian receive than Charlie?

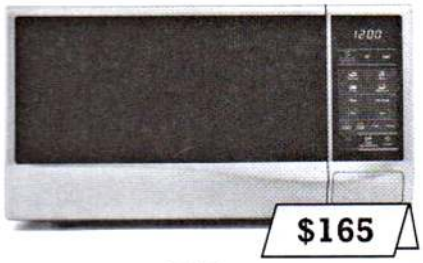
8 Mrs Tay baked some tarts. 25% of the tarts are pineapple tarts and the rest are strawberry tarts. She baked 90 more strawberry tarts than pineapple tarts. How many strawberry tarts did she bake?

Name: Class: Date:

GST, Discount and Annual Interest

Worksheet 7

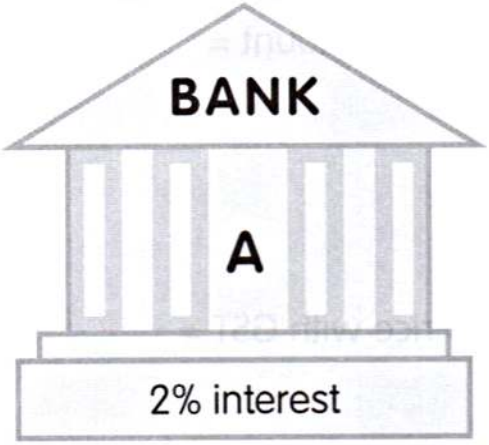
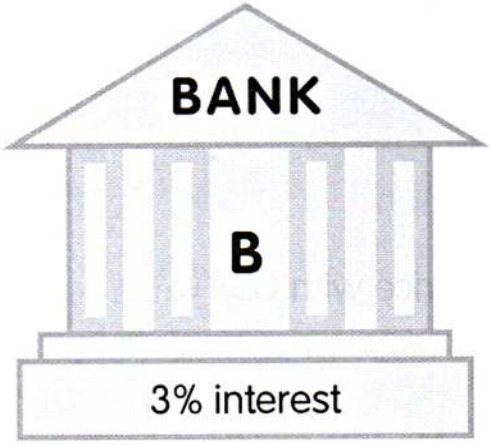
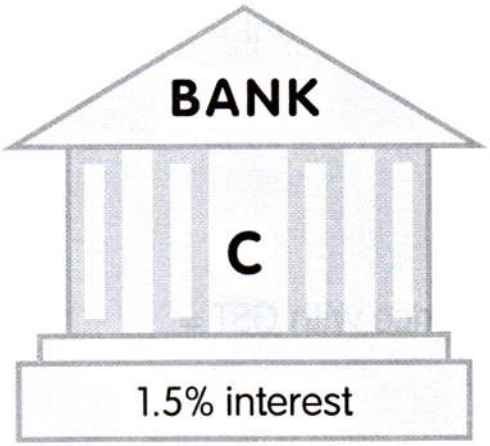
1. Find the amount to be paid for each item including GST.

Item	Amount of GST and Total amount to be paid (including 7% GST)
(a)  oven	Amount of GST = Total amount to be paid =
(b)  notebook computer	Amount of GST = Total amount to be paid =
(c)  sofa set	Amount of GST = Total amount to be paid =

2 Find the amount of discount and the price of each item after discount.

Item	Discount and Price after discount
(a)  tennis racket	Discount = Price after discount =
(b)  washing machine	Discount = Price after discount =
(c)  dress	Discount = Price after discount =

3 Find the amount of interest paid by each bank and the total savings at the end of one year.

Amount Deposited in Bank	Interest Paid and Total Savings
(a)  Deposit $5000	Interest = Total savings =
(b)  Deposit $7500	Interest = Total savings =
(c)  Deposit $18 000	Interest = Total savings =

4 Find the amount of GST and the price of each item with GST. The GST rate is 7%.

Item	GST amount and Price with GST
(a)  television set	GST amount = Price with GST =
(b)  refrigerator	GST amount = Price with GST =
(c)  dining set	GST amount = Price with GST =

Name: Class: Date:

Word Problems

L2 Worksheet 8

Solve the word problems.

1. The price of a bed was $2600. Mdm Yap bought the bed and had to pay an additional 7% GST.
   (a) What was the amount of GST she had to pay?
   (b) What was the price of the bed including GST?

2. The usual price of a desktop computer was $1098. During a sale, Ali bought a desktop computer at a discount of 15%.
   (a) How much was the discount?
   (b) How much did Ali pay for the desktop computer?

3 Mr Salim deposited $30 000 in a fixed deposit account which paid him an interest of 2.5% per year.

(a) How much interest did he receive at the end of the year?

(b) How much would he have in the fixed deposit account at the end of the year?

4 The usual price of a pair of sports shoes was $88. Mr Tay was given a 25% discount for it. How much did he have to pay for the pair of shoes after discount?

5 Devi starts a savings account with $4000 at a bank. The interest rate is 3% per year. How much will she have in her savings account at the end of one year?

6 The usual price of a home renovation package is $19 500 as advertised by Company XYZ. During a promotion, a 15% discount is offered. Ramli wants to purchase the home renovation package. How much will he need to pay for it during the promotional period?

7 Two different shops offer the following discounts for the same tablet computer priced at $750 before discount.

Blitz	Speedster
	

How much does a tablet computer cost after discount at each shop?
Which shop offers a better discount?
Show the working in the space below.

Blitz
Speedster

Name: **Class:** **Date:**

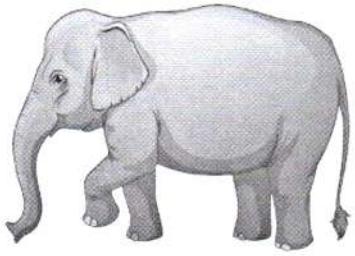
Performance Task

Activity: Express part of a whole as a percentage.

Work in pairs.

Use the 400-square grid to make a floor plan of a zoo. Show the space reserved for each animal enclosure in a different colour. Label the animal enclosures.

Note: There should be space for people to walk.



(a) Find the percentage of space reserved for each animal enclosure.
(b) Find the percentage of space **not** used for any animal enclosure.

Share your zoo plan with the class.

Problem Solving

Mrs Lim has some blue and red caps. 20% of the caps are blue. She has 60 blue caps. How many red caps does she have?

- Do you understand the problem?
- What is your plan?
- Show how you solve the problem.
- Remember to check your solution.

Plan

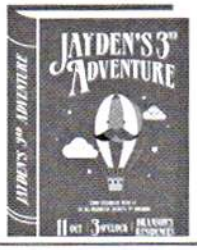
Solve

Check

Math Journal

Janice wants to buy 8 storybooks. The usual price of each storybook is $10. She thinks the storybooks will cost less if she buys them separately instead of buying 8 storybooks at once.

Do you agree with Janice's reasoning? Show and explain your reasoning.



Usual Price: $10

Discount 10%

I can get 8 discounts if I pay for the storybooks one at a time.

I get a one-time discount if I pay for the 8 storybooks at once.

Isn't it cheaper to buy the storybooks separately?

Name: Class: Date:

Review 1

Section A

Work out the questions carefully.
Show your working in the space provided.

1. Multiply. Fill in the blanks.

(a) $3.52 \times 10 =$ _____

(b) $0.61 \times 10 =$ _____

(c) $12.05 \times 10 =$ _____

(d) $9.3 \times 100 =$ _____

(e) $10.08 \times 100 =$ _____

(f) $0.843 \times 100 =$ _____

(g) $0.005 \times 1000 =$ _____

(h) $6.008 \times 1000 =$ _____

(i) $25.79 \times 1000 =$ _____

(j) $35.012 \times 1000 =$ _____

2. Multiply.

(a) 5.5×200	**(b)** 0.426×300
(c) 23.2×8000	**(d)** 0.94×7000

3 Divide. Fill in the blanks.

(a) 58.6 ÷ 10 = _____

(b) 0.92 ÷ 10 = _____

(c) 420 ÷ 100 = _____

(d) 14.3 ÷ 100 = _____

(e) 0.2 ÷ 100 = _____

(f) 9 ÷ 1000 = _____

(g) 52 ÷ 1000 = _____

(h) 633 ÷ 1000 = _____

4 Divide.

(a) 20.4 ÷ 20	**(b)** 45 ÷ 300
(c) 29.4 ÷ 700	**(d)** 2088 ÷ 6000

5 Fill in the blanks.

(a) 25 cm = _____ m

(b) 30 m = _____ km

(c) 10.2 m = _____ cm

(d) 500.8 m = _____ cm

(e) 0.12 km = _____ m

(f) 14.005 km = _____ m

(g) 45 g = _____ kg

(h) 26 100 g = _____ kg

(i) 7.13 kg = _____ g

(j) 93.4 kg = _____ g

(k) 1.4 ℓ = _____ ml

(l) 33.3 ℓ = _____ ml

(m) 582 ml = _____ ℓ

(n) 2468 ml = _____ ℓ

6 Fill in the blanks.

(a) 12 km 500 m = _____ km

(b) 60 m 15 cm = _____ m

(c) 24.05 kg = _____ kg _____ g

(d) 38.004 ℓ = _____ ℓ _____ ml

7 The table shows the number of words Peter and Ravi typed in 5 minutes. Find each boy's rate of typing in words per minute.

Name	Number of words typed	Number of minutes
Peter	180	5
Ravi	210	5

Peter's rate of typing is _____.

Ravi's rate of typing is _____.

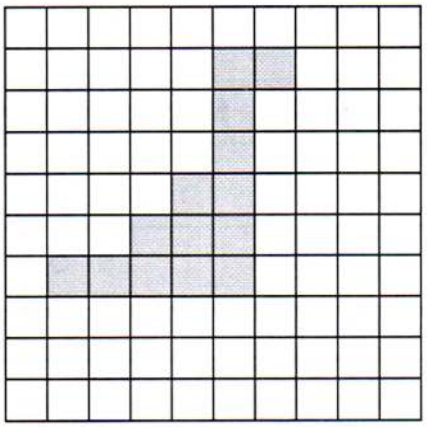
8 The table shows the costs of different numbers of similar T-shirts. Complete the table.

Number of T-shirts	Total cost
3	$15
6	$30
12	
15	
	$90
	$150

The cost of 1 T-shirt is _____.

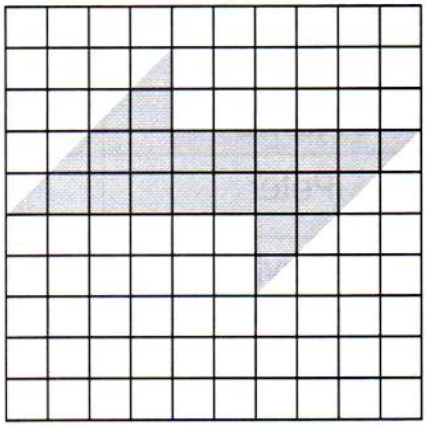
9 What percentage of the whole is shaded?

(a)



_____

(b)



_____

10 Express each percentage as a fraction in its simplest form.

(a) 28%	**(b)** 35%	**(c)** 60%

11 Express each percentage as a decimal.

(a) 13%	**(b)** 25%	**(c)** 8%

12 Write each percentage as a fraction in its simplest form and as a decimal.

Percentage	Fraction	Decimal
10%		
64%		

13 Express each fraction as a percentage.

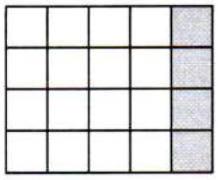
(a) $\frac{2}{5}$	**(b)** $\frac{3}{10}$	**(c)** $\frac{7}{50}$

14 Express each decimal as a percentage.

(a) 0.6	**(b)** 0.75	**(c)** 0.03

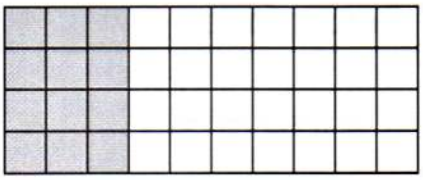
15 What percentage of the grid is shaded?

(a)



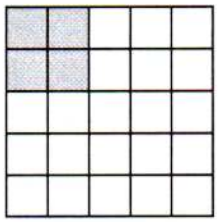
$\frac{4}{20} =$ _____

(b)



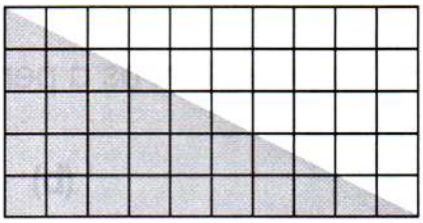
$\frac{12}{40} =$ _____

(c)



$\frac{4}{25} =$ _____

(d)



$\frac{25}{50} =$ _____

Section B

Solve the word problems.
Show your working clearly in the space provided.

1. Mr Raj paid $98.80 for a shirt, a pair of pants and a tie. The pair of pants cost $14.50 more than the shirt. The tie cost $5 more than the pair of pants. What was the price of the shirt?

2. Mrs Tay had 4.4 kg of flour. She kept 800 g of the flour and divided the remaining flour equally into 4 cups to bake some cakes. How much flour was there in each cup? Express the answer in kilograms.

3 Mr Muthu bought 12 kg of curry powder at $1.45 per kg and 30 kg of rice at $0.95 per kg. How much did he spend altogether?

4 Mrs Cheng had 1.8 m of ribbon. Mdm Aini had 1.2 m more ribbon than Mrs Cheng at first. After Mdm Aini bought more ribbon, the total length of her ribbon was 3 times as long as Mrs Cheng's ribbon. How many metres of ribbon did Mdm Aini buy?

5 Mrs Li baked cookies for sale at a school event. $\frac{3}{4}$ of the cookies were chocolate cookies and the rest were vanilla cookies. She sold $\frac{1}{2}$ of the total number of cookies. $\frac{5}{6}$ of the cookies sold were chocolate cookies. There were 18 vanilla cookies left. How many chocolate cookies were not sold?

6. Jeremy is paid $36 for working 6 hours at a fast-food restaurant. How much is he paid per hour?

7. A machine produces 1200 cans of cat food in 8 minutes. How many cans of cat food does it produce in 1 minute?

8. The total mass of 8 identical cans of sardines is 5.2 kg. What is the total mass of 2 identical cans of sardines?

9 The rates of charges for taxi fare in a certain town are shown in the table.

First km	\$2.60
For every additional km	\$0.50

How much is Mr Rajah's taxi fare for a journey of $7\frac{1}{2}$ km?

10 The rental rates of a holiday chalet are shown below.

Weekdays	\$70 per day
Weekends	\$80 per day

(a) Mr Salim rented the chalet from Thursday to Sunday. How much did he pay?

(b) Mr Wong rented 2 chalets from Monday to Saturday. How much did he pay in all?

11 Water flows from a tap at the rate of 25 ℓ per minute.

(a) At this rate, how much water can be collected in 18 minutes?

(b) How long will it take to fill a container of capacity 200 ℓ with water completely?

12 A bowling club has 600 members. 15% of the members are children. How many adults are there?

13 A swimming club has 360 members. 35% of the members are boys, 40% are girls and the rest are adults. How many members are adults?

14 The usual price of a laptop was $1250. It was sold at a discount of 30% during a sale. What was the price of the laptop after discount?

15 Mr Sim bought a pair of shoes for $208. He had to pay an additional 7% GST. How much did he pay for the shoes with GST added?

16 Mrs Ng deposits $8000 in a bank. The bank pays 2% interest per year. How much money will Mrs Ng have at the end of 1 year?

17 The table shows the ticket price for watching a movie at Sunshine Cinema. Siti and Janice are students. They buy two tickets in all. How much do they save on the total price of the movie tickets?

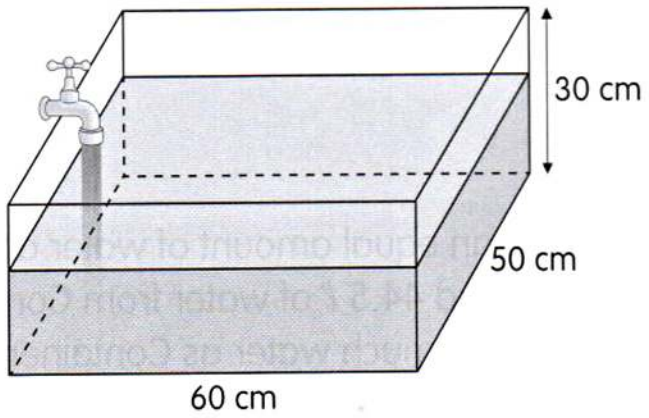
Movie	Usual ticket price	Student price
Magic Land	$15	8% discount

18 A baker has 260 buns. 30% of the buns are kaya buns, 25% of the buns are tuna buns and the rest are coconut buns. How many fewer tuna buns than kaya buns does he have?

19 There were 6000 people at a carnival. 80% of the people were children. How many more children than adults were at the carnival?

20 Containers A and B had an equal amount of water at first. After 25.5 ℓ of water from Container A and 44.5 ℓ of water from Container B were used, Container A had 5 times as much water as Container B. How much water was in Container B at first?

21 A rectangular tank 60 cm long, 50 cm wide and 30 cm high was partially filled with water. A tap was then turned on to fill the tank with more water. The water from the tap flowed into the tank at a rate of 6 ℓ per min. It took 8 min to fill the tank completely.
What was the volume of water in the tank before the tap was turned on? Give your answer in litres.



22 A car can travel 84 km on 7 ℓ of petrol.

(a) How far can the car travel on 1 ℓ of petrol?

(b) How far can the car travel on 13 ℓ of petrol at the same rate of petrol usage?

(c) How much petrol is needed for the car to travel 132 km?

23 Mrs Wong paid $18.60 for a chocolate cake and 6 egg tarts. Mrs Tan paid $29.40 for the same type of chocolate cake and 24 egg tarts. How much did one chocolate cake cost?

Name: Class: Date:

10 Average

Understanding Average

L1 Worksheet 1

1 Find the average of each set of numbers or measurements.

(a) 10, 16, 20, 26
(b) 9, 17, 0, 14
(c) 25.3 m, 41.6 m, 35.4 m
(d) 475 ml, 269 ml, 512 ml, 804 ml

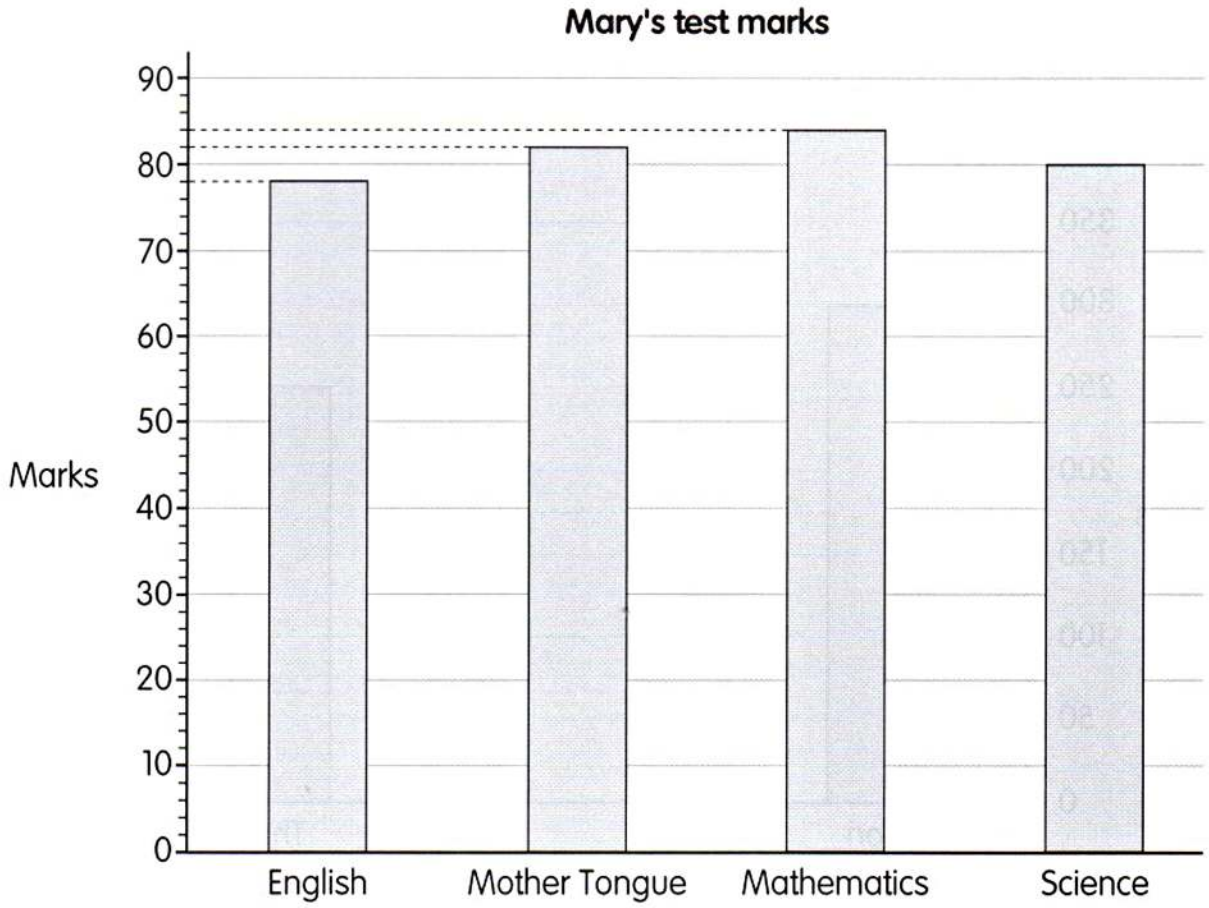
2. Mrs Lee sold 1400 buns in 4 days. Find the average number of buns sold per day.

3. The total cost of food for 5 children is $20.75. What is the average cost of food per child?

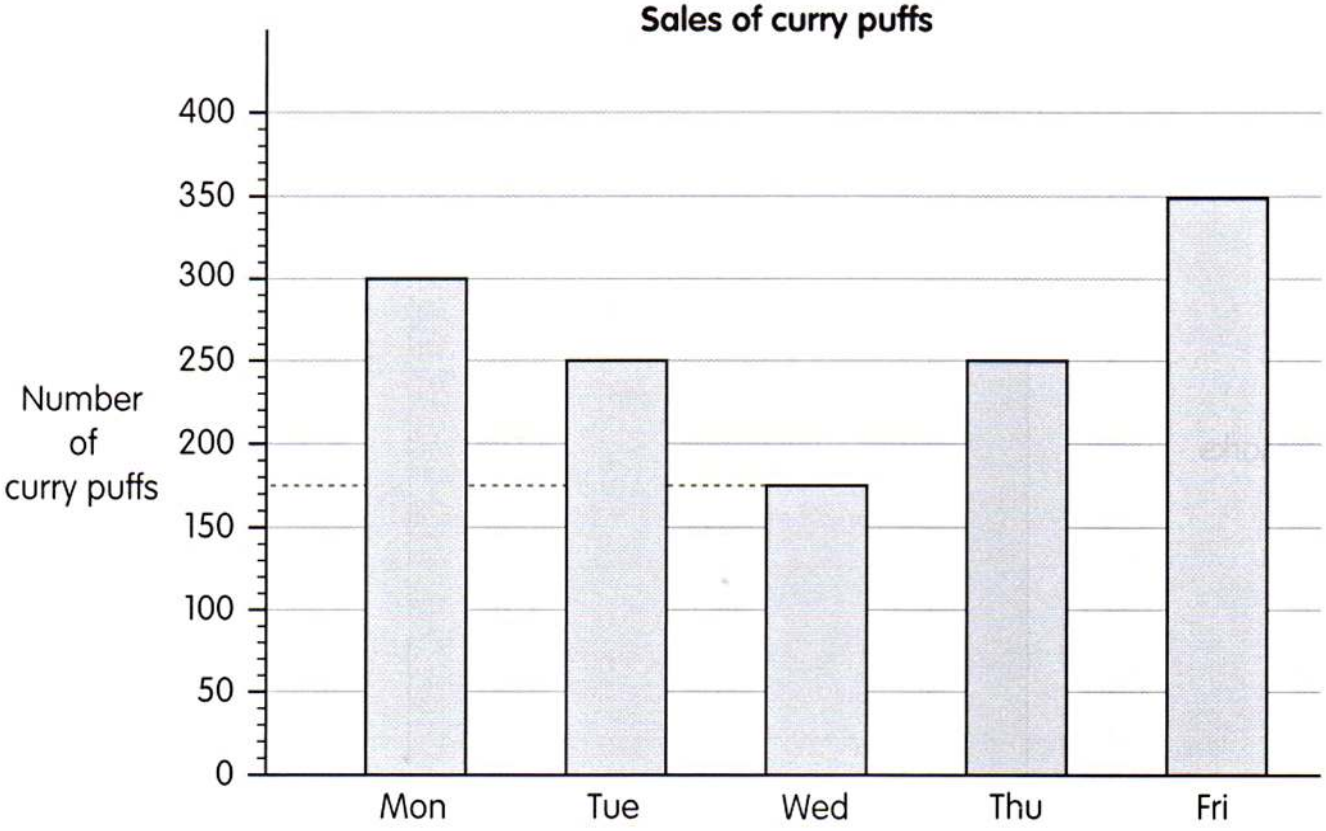
4. The table shows the masses of 3 boys. What is the average mass of each boy?

Name	Mass
George	38.5 kg
Jason	45.4 kg
Ahmad	41.8 kg

5 The bar graph shows the marks Mary scores in 4 tests. On the average, how many marks does she score for each test?



6 The bar graph shows the sales of curry puffs over 5 days at a shop. What is the average number of curry puffs sold per day?



Name: Class: Date:

Average, Total and Number of Data

LI Worksheet 2

1 Find the total.

(a)

3 cards

Average score
= 16

Total score
= _____

(b)

4 T-shirts

Average price
= $15.30

Total price
= _____

(c)

6 books

Average mass
= 2.16 kg

Total mass
= _____

2 Find the missing quantities.

(a) Total cost of bags = $532
Average cost of bags = $38

Number of bags = _____

(b) Total length of ribbons = 15.21 m
Average length of ribbons = 1.69 m

Number of ribbons = _____

(c) Average volume of water = 378 ml
Total volume of water = 1890 ml

Number of bottles containing water = _____

3 Complete the table.

Number of data	Average	Total
_____ bags	35 marbles	840 marbles
_____ boxes	12 chicken wings	216 chicken wings

Name: **Class:** **Date:**

L2 Worksheet 3

1. Find the missing number.

(a)

7	8	4	?

The average of the 4 numbers is 8.

(b)

6.6	8.5	11.1	?

The average of the 4 numbers is 10.6.

2 Complete the table.
Show your working in the space provided.

(a)

Round	Number of netball goals
1	70
2	62
3	

Average number of goals = 64

(b)

Subject	Marks
English	97
Mathematics	88
Science	78
Mother Tongue	

Average marks = 90

The table shows Peter's marks for 5 Mathematics tests. He scored the same marks for Test 4 and Test 5. He scored an average of 83 marks for the 5 tests. How many marks did he score for Test 4?

Maths Test	Marks
1	76
2	79
3	80
4	?
5	?

3 The table shows Peter's marks for 5 Mathematics tests. He scored the same marks for Test 4 and Test 5. He scored an average of 83 marks for the 5 tests. How many marks did he score for Test 4?

Maths Test	Marks
1	76
2	79
3	80
4	?
5	?

4 40 pupils in Class 5C took part in a fund-raising event. The table shows the amount of money collected by each group of pupils in 5C.

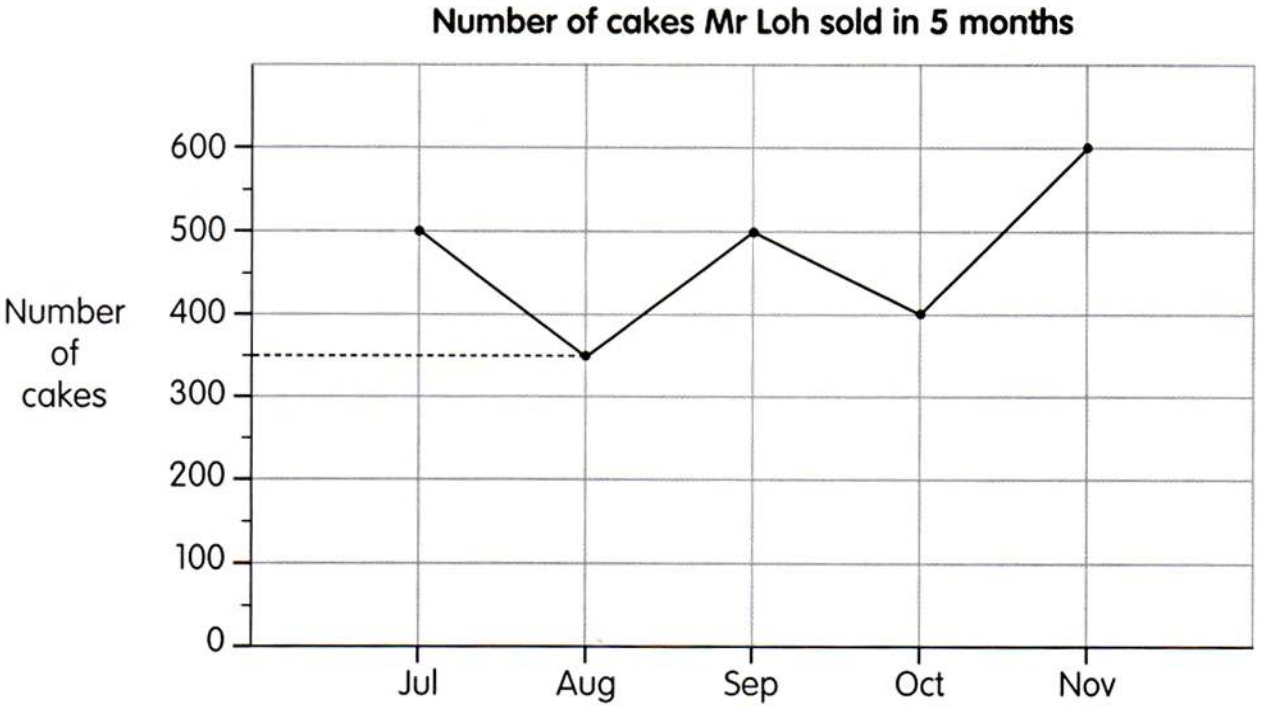
Group	Number of pupils	Amount collected
Red	9	$207
Blue	11	$275
Green	8	$192
Yellow	?	?

(a) How many pupils were there in Yellow Group?

(b) The total amount collected by the 4 groups of pupils was $1040. How much did the pupils in Yellow Group collect?

(c) What was the average amount collected by each pupil in Yellow Group?

5 The line graph shows the number of cakes Mr Loh sold in each month over a period of 5 months.



(a) What was the average number of cakes sold per month?

(b) The average number of cakes Mr Loh sold from July to December was 500. How many cakes did he sell in December?

6 On the average, Mr Tay sold 70 T-shirts per month from January to April. The bar graph shows the number of T-shirts sold by Mr Tay during the 4 months. The bar graph was partially torn off.
What was the number of T-shirts sold in April?

Name: Class: Date:

L3 Worksheet 4

Solve the problems.

1. Janice is given a card with 3 numbers circled. She has to circle one more number so that the average of the 4 numbers is 92. Which number should Janice circle?

(94)	91	96
93	(90)	92
95	88	(89)

2 The table shows the distances 3 boys jumped during a long jump event. Each boy had 3 jumps. Who had the greatest average distance?

Name	1st Jump	2nd Jump	3rd Jump
Yunos	3.1 m	3.45 m	3.32 m
Xavier	2.96 m	3.51 m	3.43 m
Zack	3.26 m	3.32 m	3.44 m

Name: Class: Date:

Performance Task

Activity: Discuss and use a suitable length of raffia to represent the average height of group members.

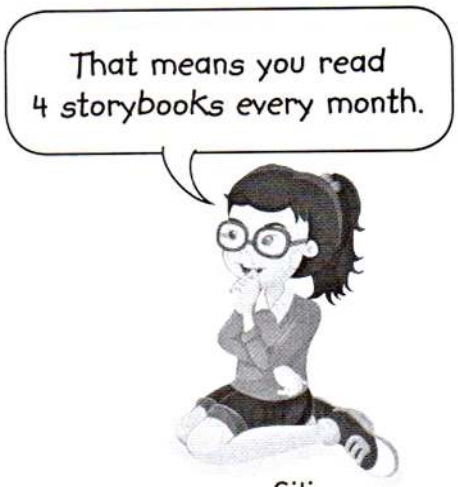
Work in groups of 5 or 7 pupils.
Each group will be given a ball of raffia and a pair of scissors.

Show how the group finds the average height of the members using raffia.

Describe how the group decides on the length of raffia to use to represent the average height of the group members.

Math Journal

Janice



Siti

Is Siti's statement correct? Why?
Give examples to illustrate Janice's statement.

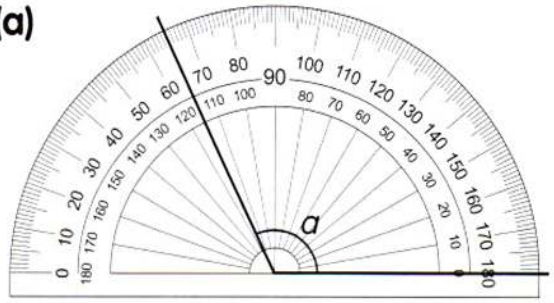
Name: Class: Date:

11 Angles

Recall (Measuring angles in degrees)

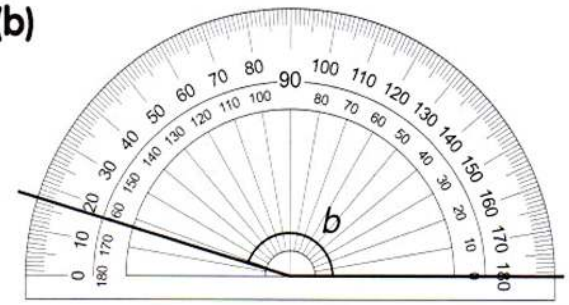
1 Fill in the blanks with the size of each marked angle.

(a)



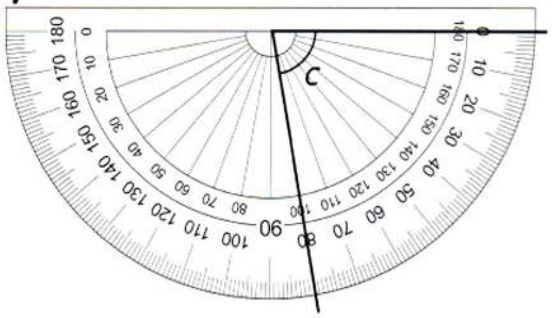
$\angle a =$ _____

(b)



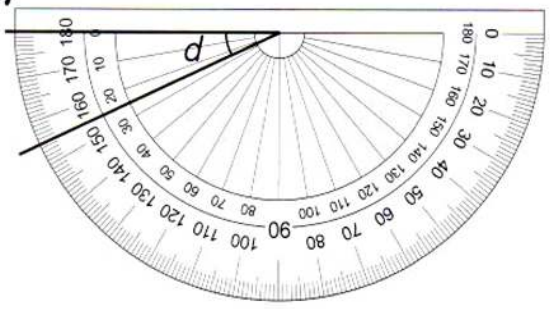
$\angle b =$ _____

(c)



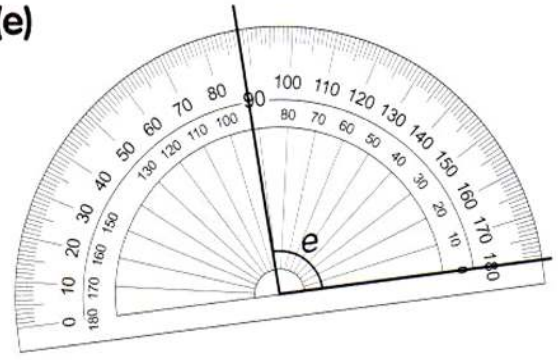
$\angle c =$ _____

(d)



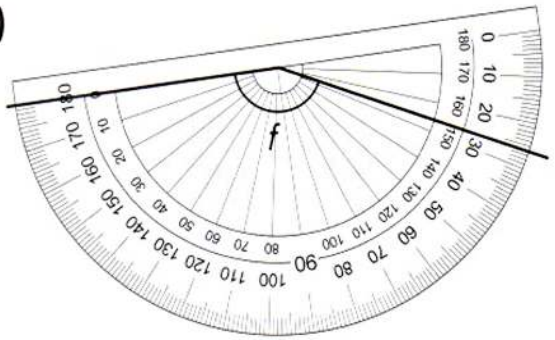
$\angle d =$ _____

(e)



$\angle e =$ _____

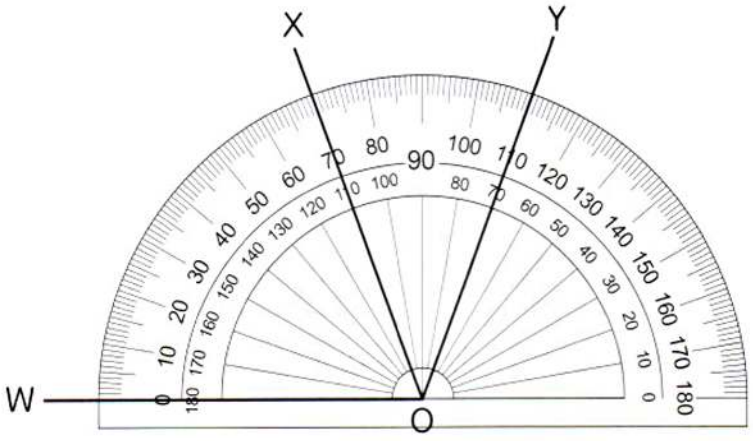
(f)



$\angle f =$ _____

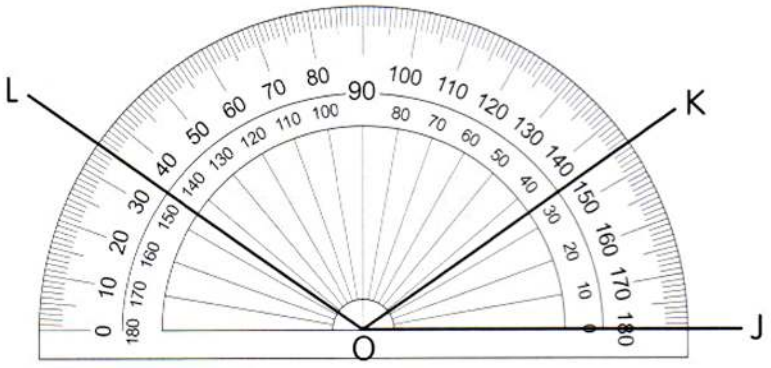
2 Name the correct angles.

(a)



∠ _____ = 70° ∠ _____ = 110°

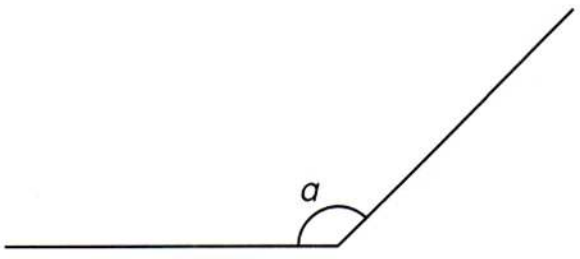
(b)



∠ _____ = 145° ∠ _____ = 35°

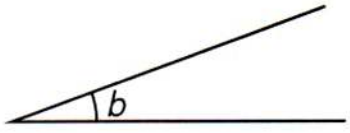
3 Measure each marked angle with a protractor.

(a)



∠a = _____

(b)



∠b = _____

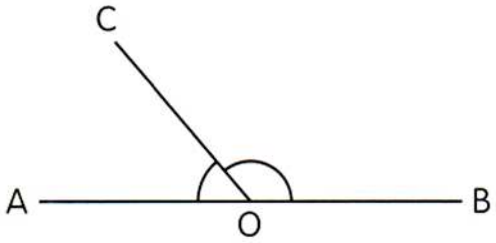
Name: Class: Date:

Angles on a Straight Line

L1 Worksheet 1

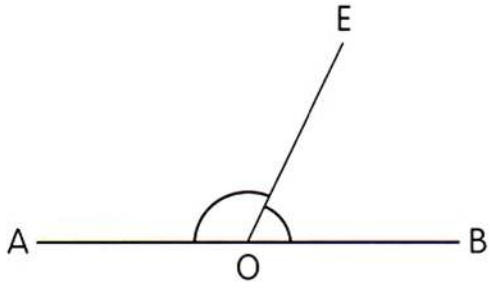
1. In each of the following figures, AOB is a straight line.
Fill in the missing angles.

(a)



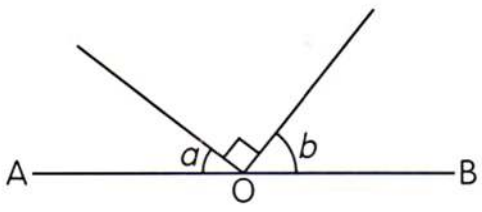
$\angle$_____ + $\angle$_____ = 180°

(b)



$\angle$_____ + $\angle$_____ = 180°

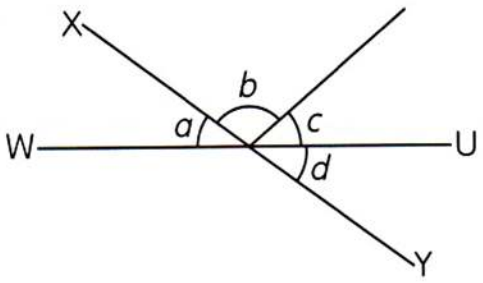
(c)



$\angle$_____ + _____ + $\angle$_____ = 180°

2 Fill in the blanks.

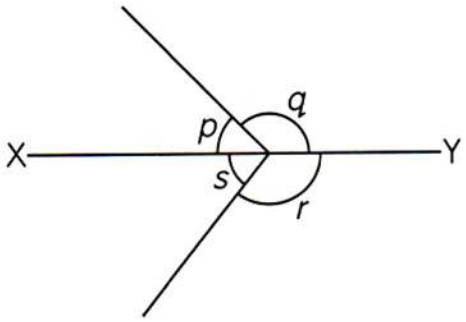
(a) WU and XY are straight lines.



∠_____ + ∠_____ + ∠_____ = 180°

∠_____ + ∠_____ + ∠_____ = 180°

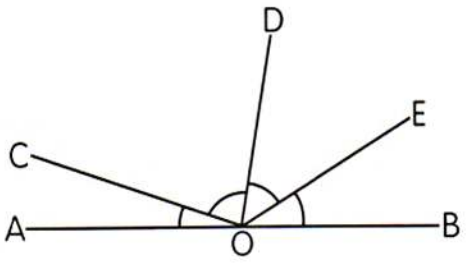
(b) XY is a straight line.



∠_____ + ∠_____ = 180°

∠_____ + ∠_____ = 180°

(c) AOB is a straight line.



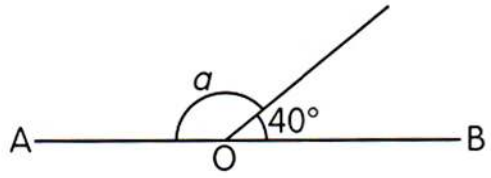
∠_____ + ∠_____ + ∠DOB = 180°

Name: **Class:** **Date:**

L1 Worksheet 2

1 In each of the following figures, AOB is a straight line. Find the unknown marked angles.

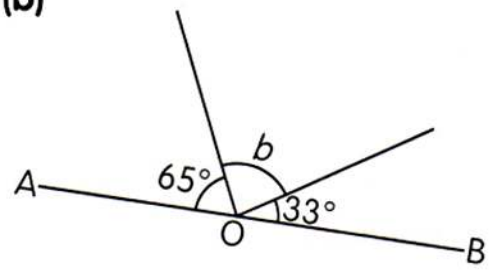
(a)



$\angle a =$ _____ − _____

$=$ _____

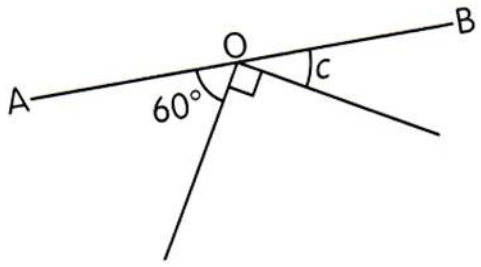
(b)



$\angle b =$ _____ − _____ − _____

$=$ _____

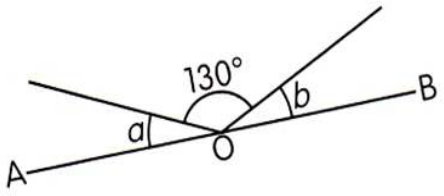
(c)



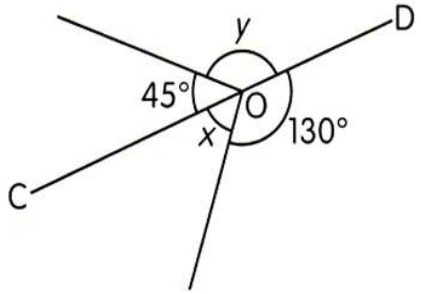
$\angle c =$

2 Find the unknown marked angles.

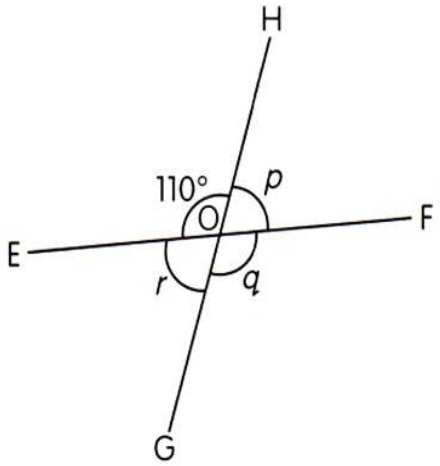
(a) AOB is a straight line and $\angle a = \angle b$.



(b) COD is a straight line.



(c) EOF and GOH are straight lines.



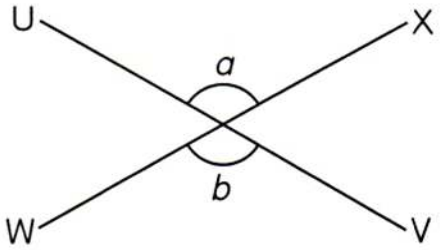
Name: Class: Date:

Vertically Opposite Angles

Worksheet 3

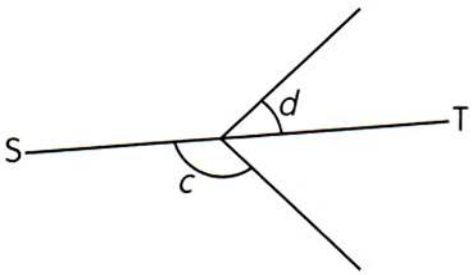
1 Read each question and circle 'Yes' or 'No'.

(a) UV and WX are straight lines.



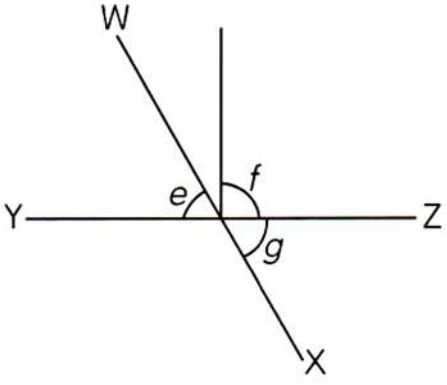
Is $\angle a = \angle b$? Yes or No

(b) ST is a straight line.



Is $\angle c = \angle d$? Yes or No

(c) WX and YZ are straight lines.

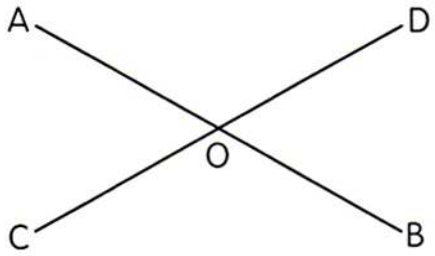


Is $\angle e = \angle f$? Yes or No

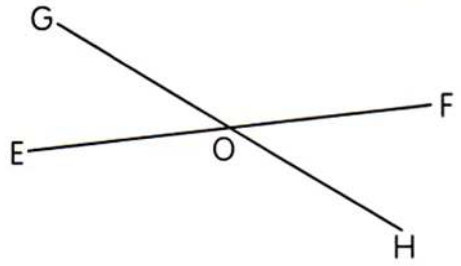
Is $\angle e = \angle g$? Yes or No

2 Name the pairs of vertically opposite angles.

(a) AOB and COD are straight lines.

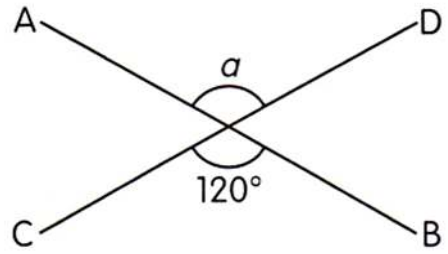


(b) EOF and GOH are straight lines.

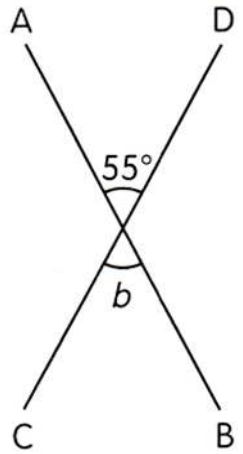


3 AB and CD are straight lines. Find the unknown marked angles.

(a)



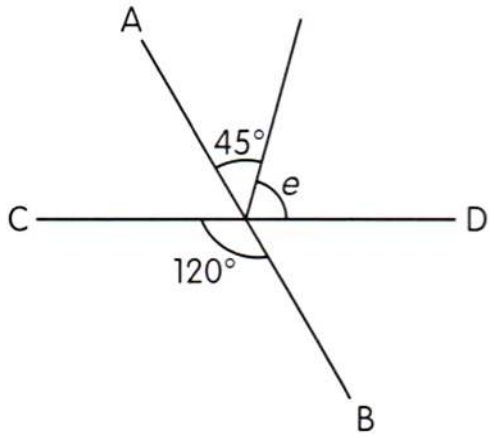
(b)



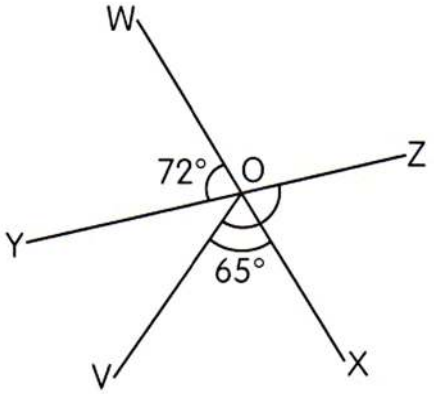
Name: **Class:** **Date:**

L2 Worksheet 4

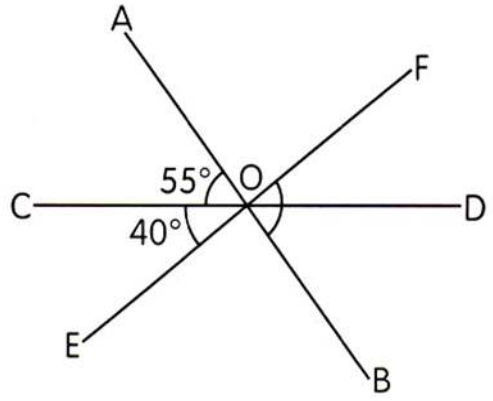
1. AB and CD are straight lines. Find $\angle e$.



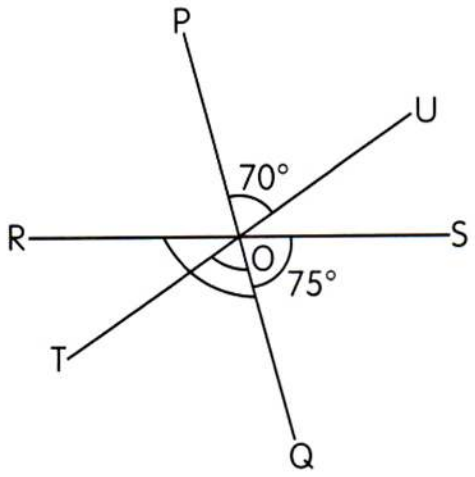
2. WOX and YOZ are straight lines. Find $\angle VOZ$.



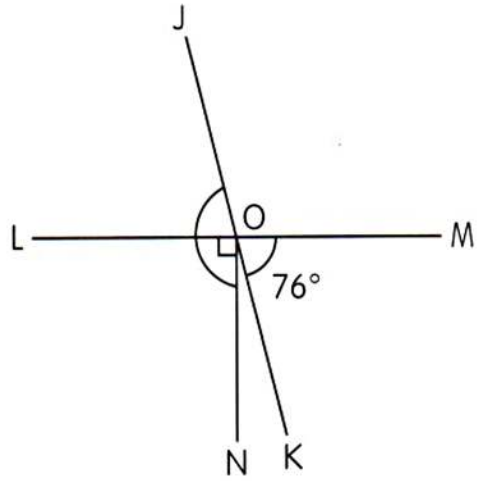
3. AOB, COD and EOF are straight lines. Find $\angle BOF$.



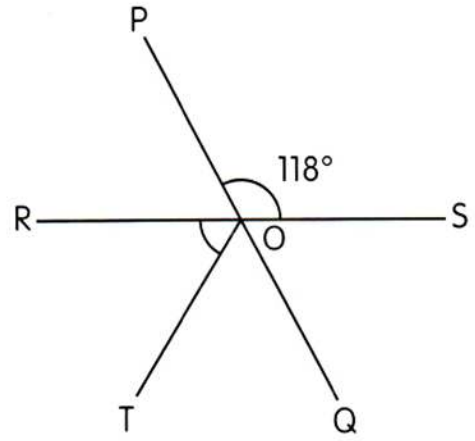
4 POQ, ROS and TOU are straight lines. Find ∠QOT and ∠QOR.



5 JOK and LOM are straight lines. Find ∠JON.



6 POQ and ROS are straight lines and ∠ROT = ∠TOQ. Find ∠ROT.



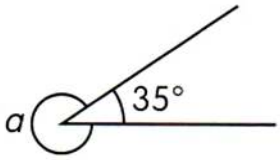
Name: Class: Date:

Angles at a Point

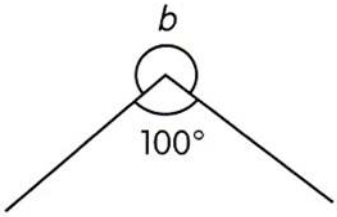
LI Worksheet 5

1 Find the unknown marked angles.

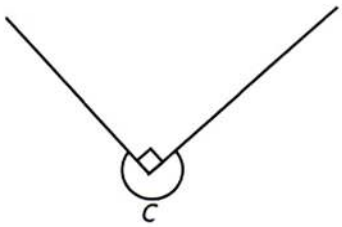
(a)



(b)

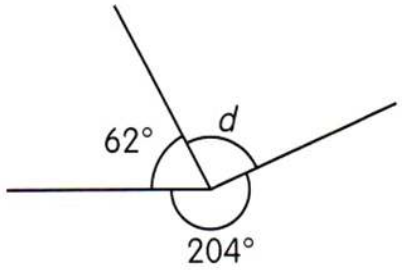


(c)

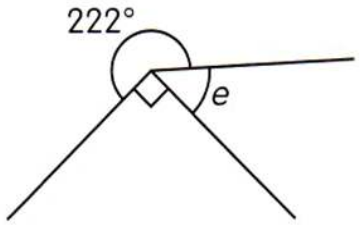


2 Find the unknown marked angles.

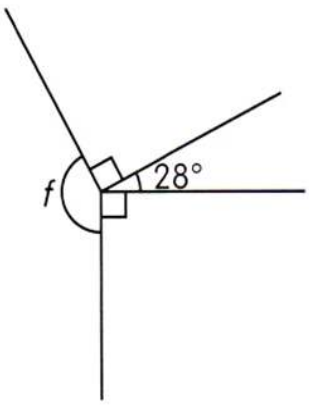
(a)



(b)



(c)



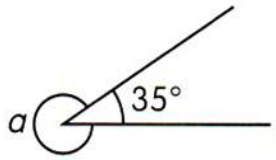
Name: Class: Date:

Angles at a Point

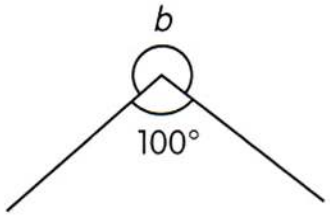
Worksheet 5

1. Find the unknown marked angles.

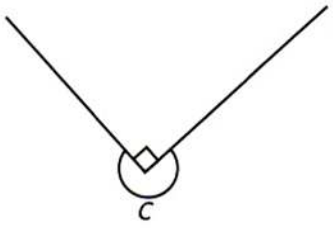
(a)



(b)

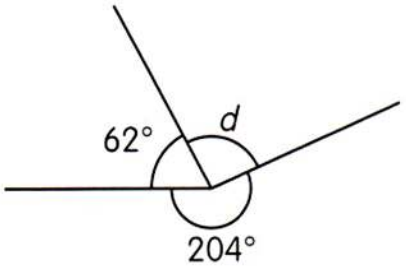


(c)

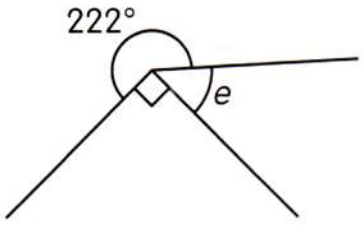


2 Find the unknown marked angles.

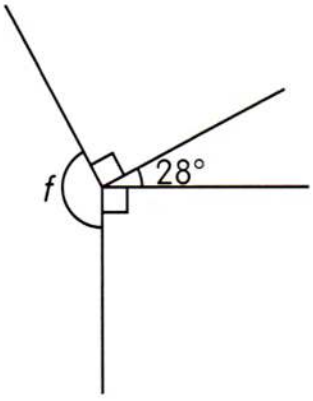
(a)



(b)



(c)

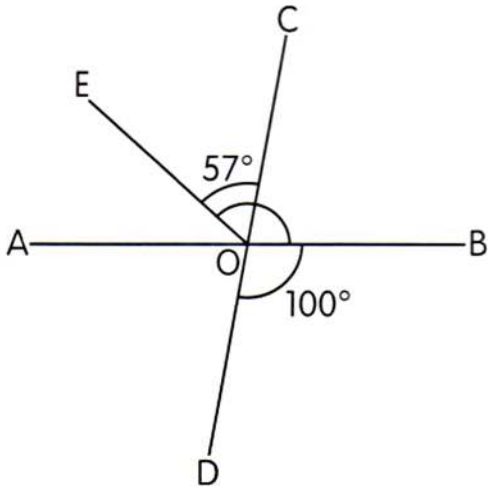


Name: Class: Date:

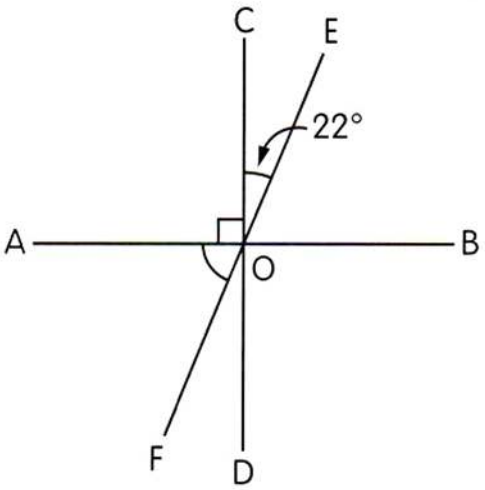
Finding Unknown Angles

Worksheet 6

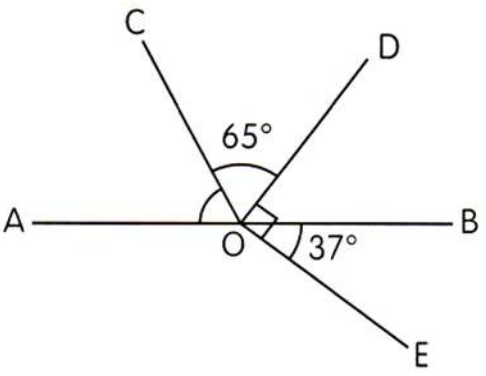
1. AOB and COD are straight lines. Find ∠BOE.



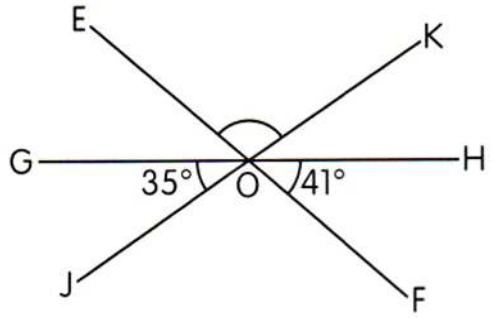
2. AOB, COD and EOF are straight lines. Find ∠AOF.



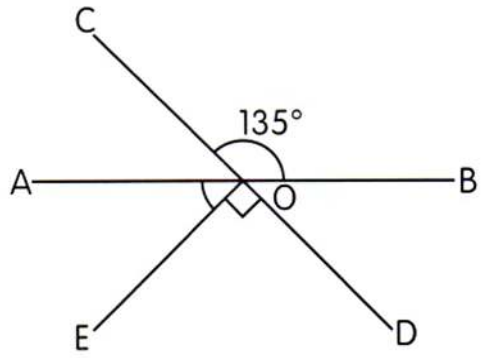
3. AOB is a straight line. Find ∠AOC.



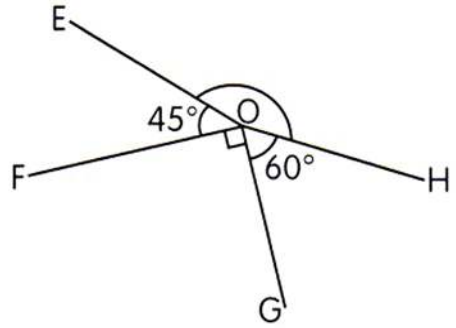
4 EOF, GOH and JOK are straight lines. Find ∠EOK.



5 AOB and COD are straight lines. Find ∠AOE.



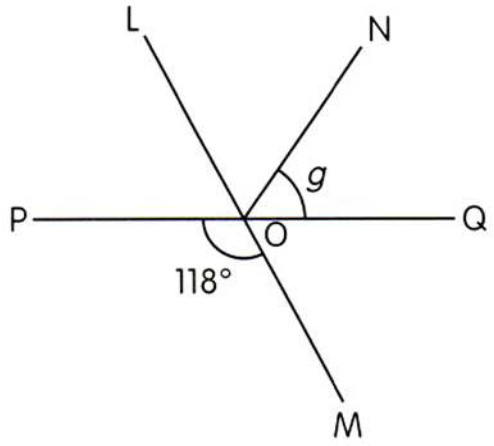
6 Find ∠EOH.



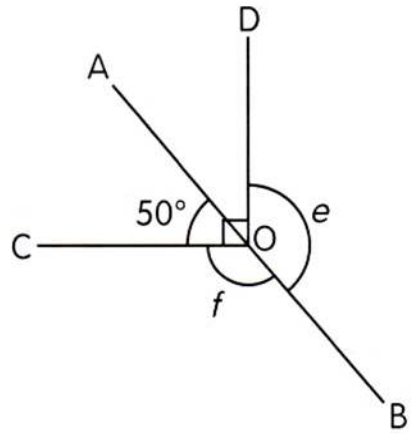
Name: **Class:** **Date:**

L2 Worksheet 7

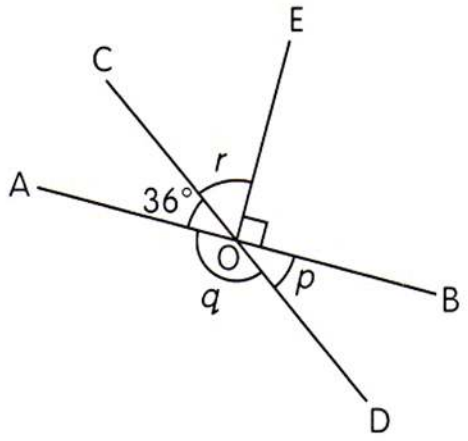
1. LOM and POQ are straight lines. ∠POM = 118° and ∠LOP = ∠LON.
Find ∠*g*.



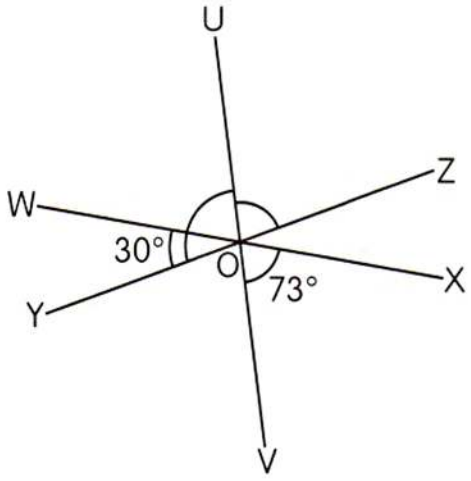
2. AOB is a straight line. ∠AOC = 50° and ∠COD is a right angle.
Find ∠*e* and ∠*f*.



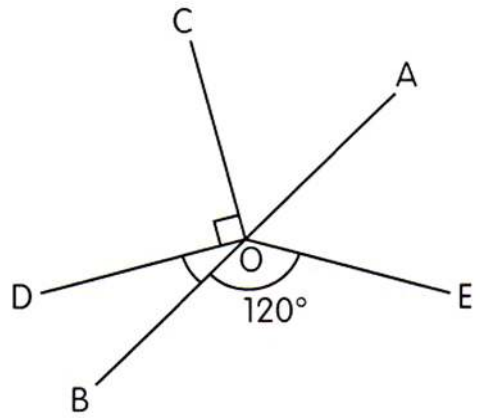
3 AOB and COD are straight lines and $\angle AOC = 36°$. Find $\angle p$, $\angle q$ and $\angle r$.



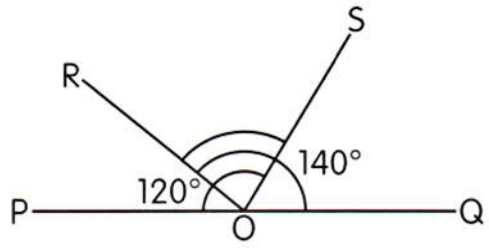
4 UOV, WOX and YOZ are straight lines. Find $\angle UOZ$ and $\angle UOY$.



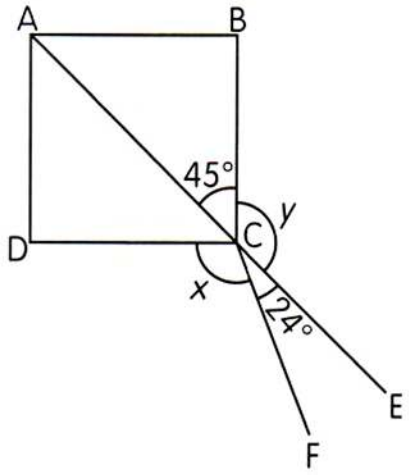
5 AOB is a straight line and ∠AOE = ∠AOC. Find ∠BOD.



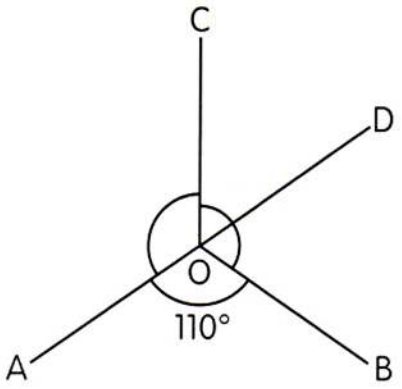
6 POQ is a straight line. ∠POS = 120° and ∠QOR = 140°. Find ∠ROS.



7 ABCD is a square. $\angle ACB = 45°$ and $\angle ECF = 24°$. ACE is a straight line. Find $\angle x$ and $\angle y$.



8 In the figure, $\angle AOC = \angle BOC$ and $\angle AOB = 110°$. $\angle AOD$ is a straight line. Find $\angle AOC$ and $\angle BOD$.

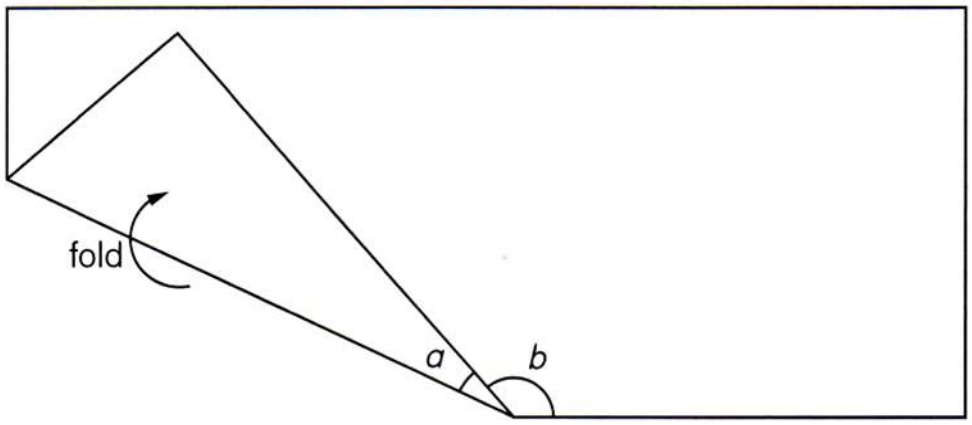


Name: **Class:** **Date:**

Performance Task

Activity: Find an angle using angle property.

Work in pairs.
Fold a piece of A4 paper as shown and use a protractor to measure $\angle a$ only.
Explain how you can find $\angle b$ without using a protractor.

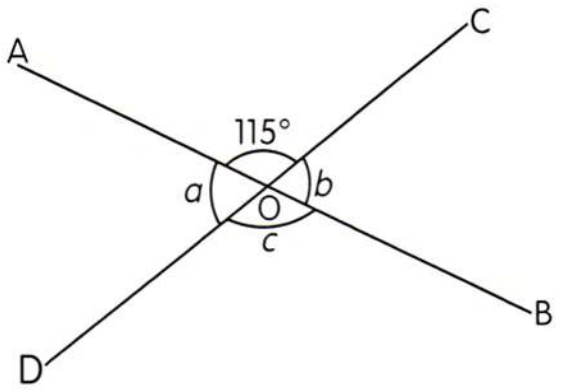


$\angle a =$ _____

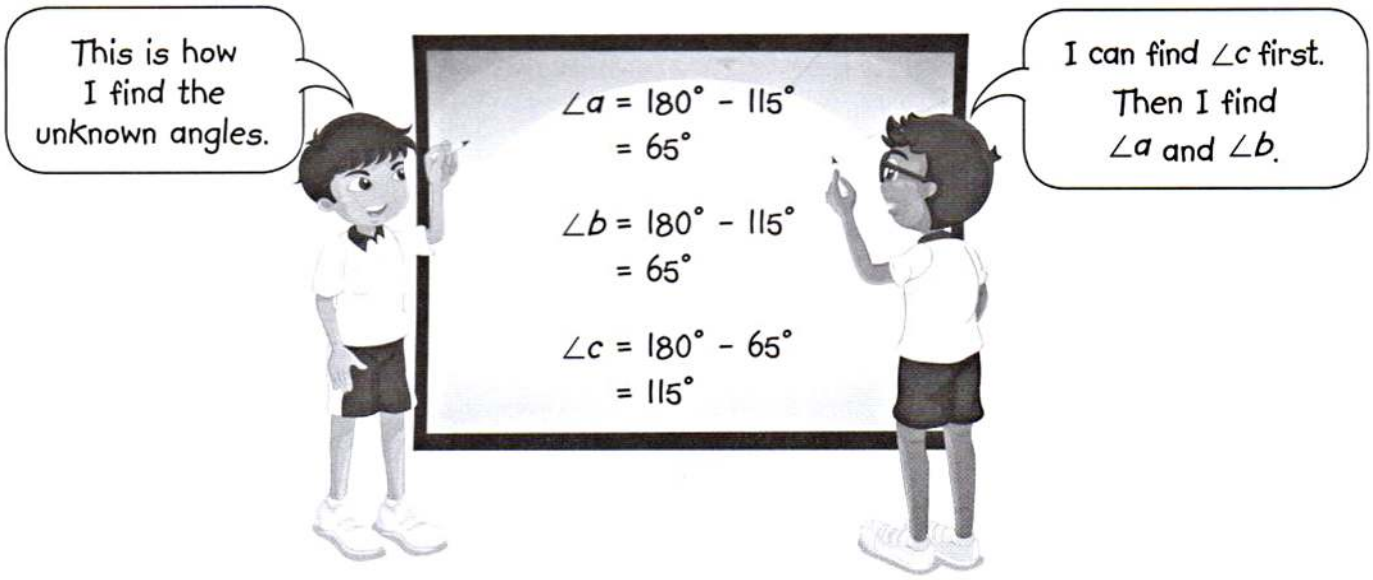
Find $\angle b$ without using the protractor as follows:

Math Journal

In the figure, AOB and COD are straight lines.



Ravi and Peter attempted to find the unknown angles in the figure.



Explain how Ravi could have worked out his answers.

Name: Class: Date:

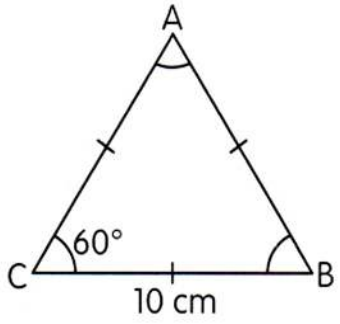
12 Properties Of Triangles

Types of Triangles

L1 Worksheet 1

1 Fill in the blanks.

(a) ABC is an equilateral triangle.



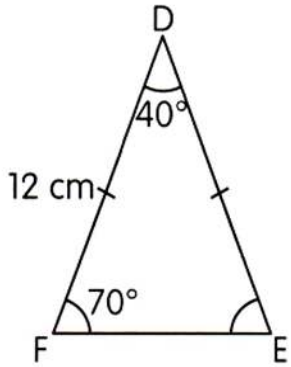
∠BAC = _____ °

∠ABC = _____ °

AB = _____ cm

AC = _____ cm

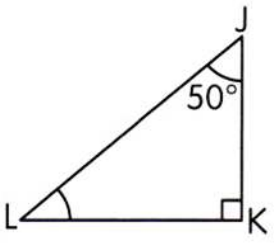
(b) DEF is an isosceles triangle.



∠DEF = _____ °

DE = _____ cm

(c) JKL is a right-angled triangle.

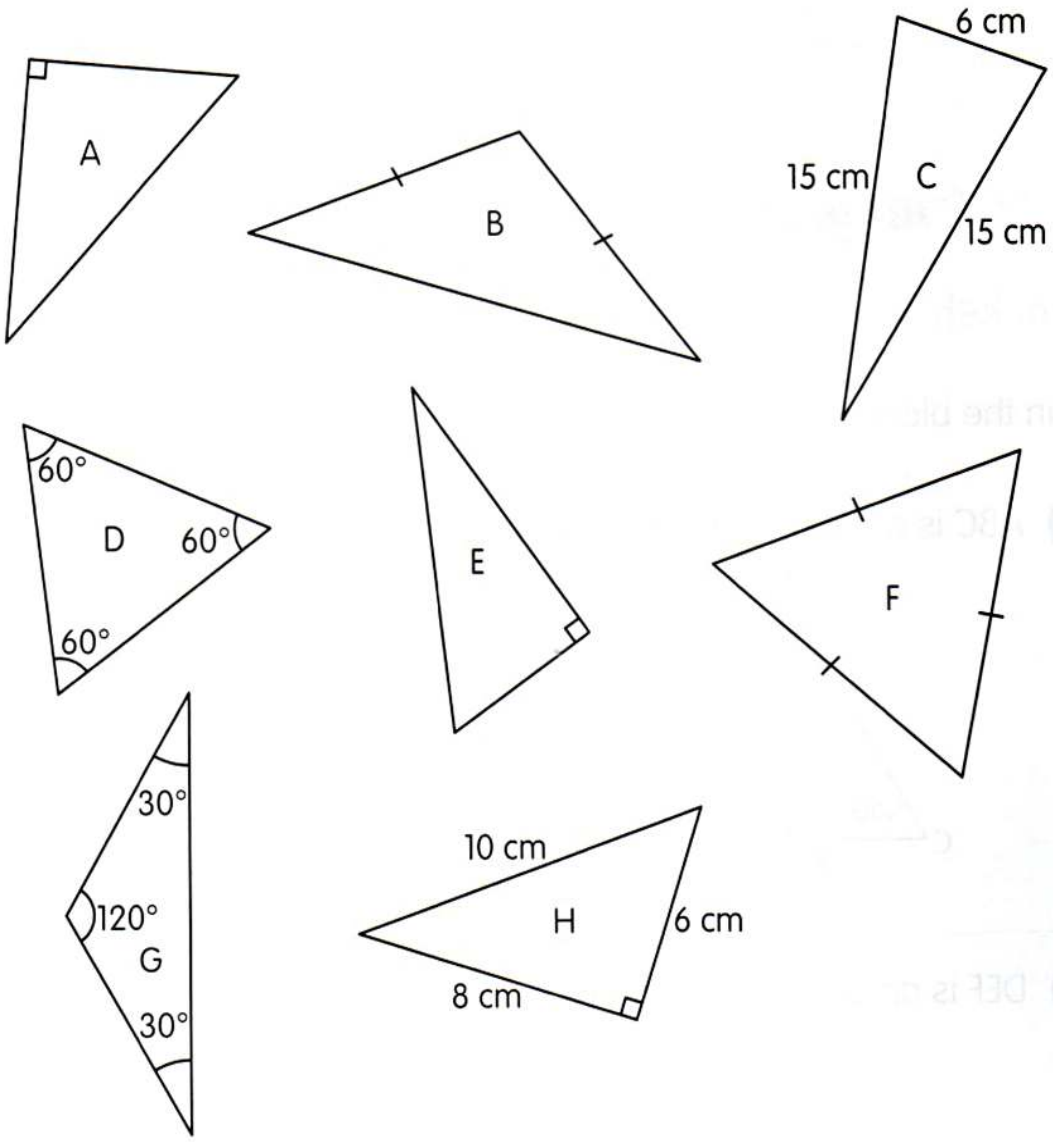


∠JKL = _____ °

∠JLK = _____ °

∠JLK + ∠KJL = _____ °

2 Group the triangles and write the letters in the table correctly.

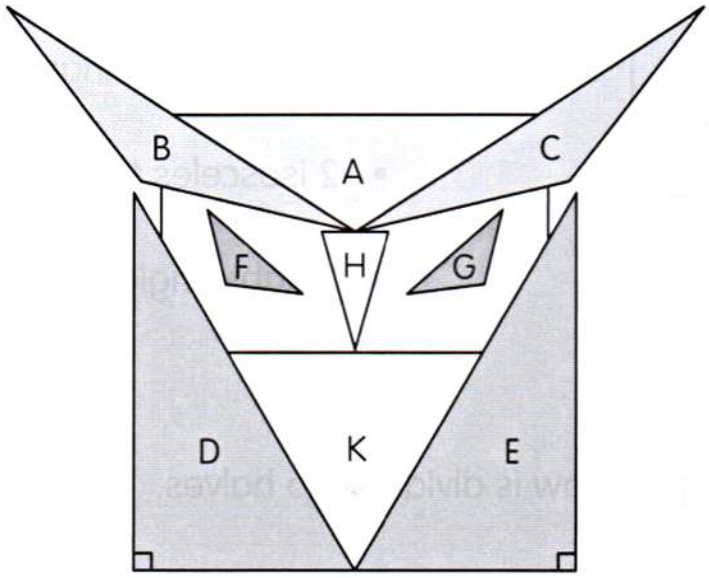


Equilateral triangle	Isosceles triangle	Right-angled triangle

Name: Class: Date:

L2 Worksheet 2

1 Identify the triangles in the figure and write the letters in the table below.



(a)

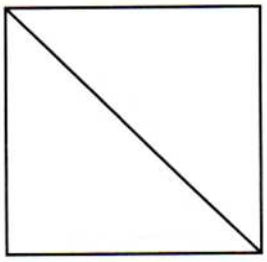
Equilateral triangle	
Isosceles triangle	
Right-angled triangle	

(b)

Acute-angled triangle	
Obtuse-angled triangle	

2 Put a tick (✓) in the box for each correct statement.

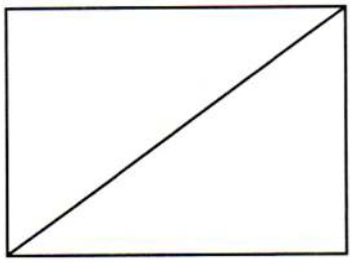
(a) The square below is divided into halves.



There are:

- 2 equilateral triangles ☐
- 2 isosceles triangles ☐
- 2 right-angled triangles ☐

(b) The rectangle below is divided into halves.



Each half is:

- an equilateral triangle ☐
- an isosceles triangle ☐
- a right-angled triangle ☐

Name: Class: Date:

Drawing Triangles

L1 Worksheet 3

1. Draw a triangle ABC in which BC = 6 cm, $\angle ABC = 40°$ and $\angle ACB = 55°$.

Sketch

2. Draw an equilateral triangle JKL such that each side is 5 cm long.

Sketch

3 Draw a right-angled triangle XYZ such that XY = 6 cm, YZ = 3 cm and $\angle XYZ = 90°$.

Sketch

4 Draw an isosceles triangle PQR in which PQ = QR = 4 cm and $\angle PQR = 135°$.

Sketch

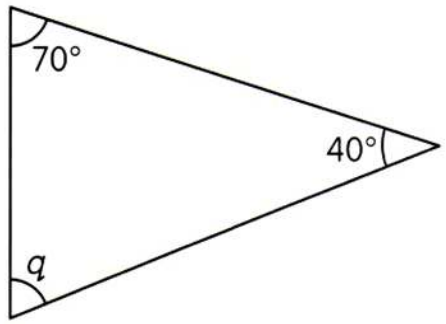
Name: Class: Date:

Angles of a Triangle

Worksheet 4

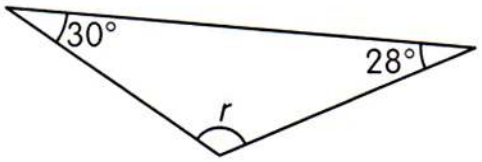
1 Find the unknown marked angles in the triangles.

(a)



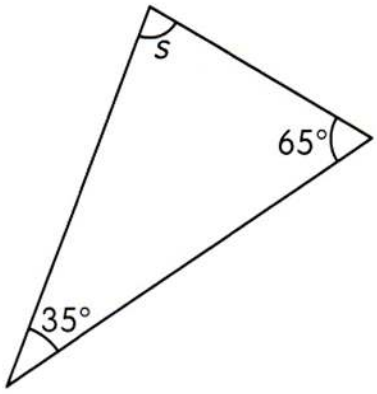
$\angle q =$

(b)



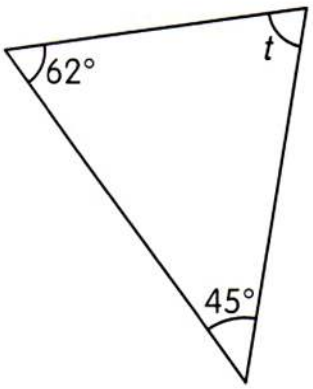
$\angle r =$

(c)



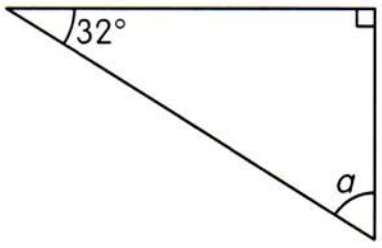
$\angle s =$

(d)



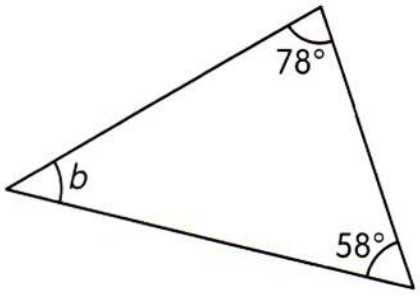
$\angle t =$

(e)



$\angle a =$

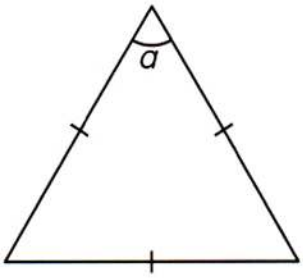
(f)



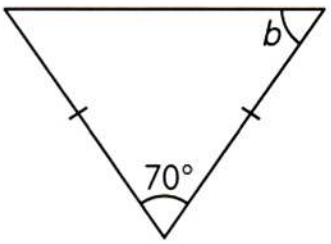
$\angle b =$

2 Find the unknown marked angles in the triangles.

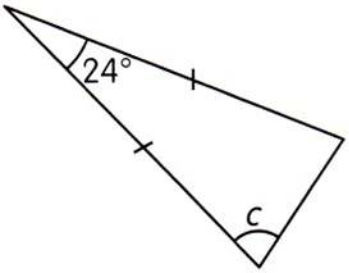
(a)



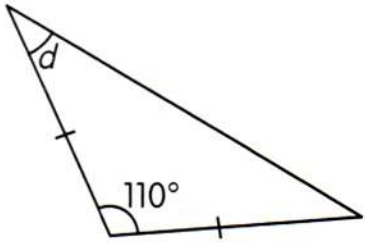
(b)



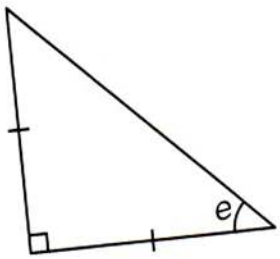
(c)



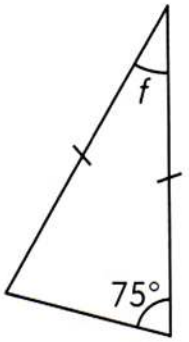
(d)



(e)



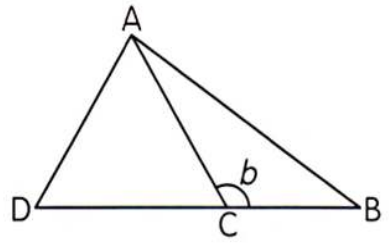
(f)



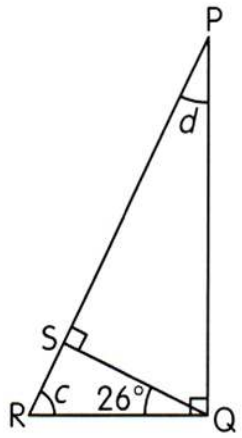
Name: **Class:** **Date:**

L2 Worksheet 5

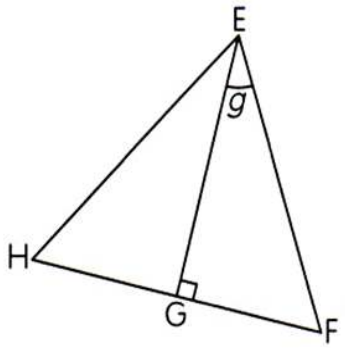
1. ACD is an equilateral triangle and BCD is a straight line. Find $\angle b$.



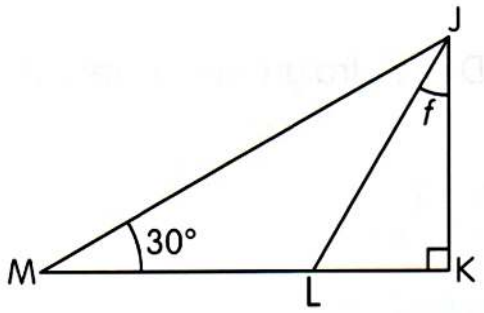
2. PSR is a straight line and $\angle$PSQ and $\angle$PQR are right angles. Find $\angle c$ and $\angle d$.



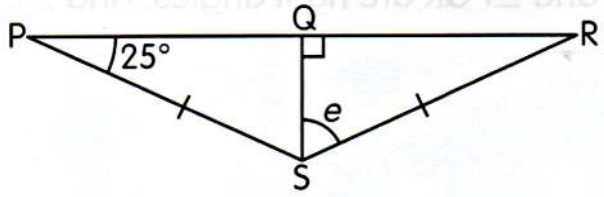
3. EFH is an equilateral triangle. Find $\angle g$.



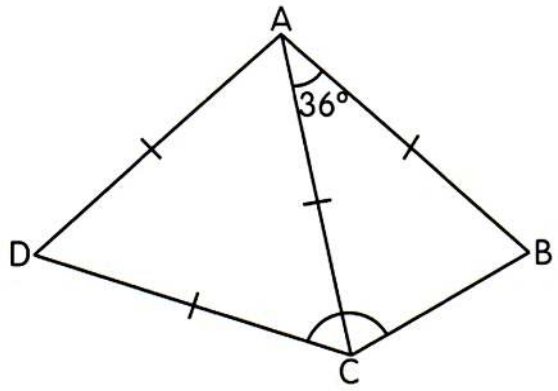
4 KLM is a straight line. JLM is an isosceles triangle and JL = LM. Find $\angle f$.



5 PQR is a straight line and PS = RS. Find $\angle e$.



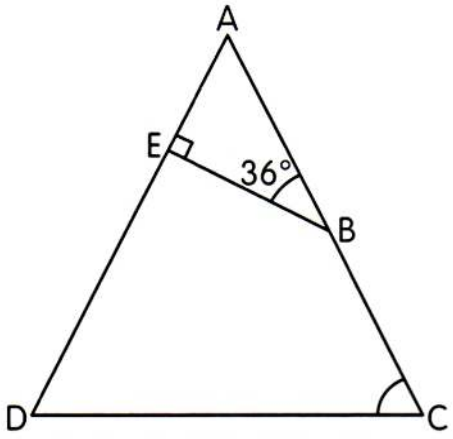
6 ACD is an equilateral triangle. ABC is an isosceles triangle and AB = AC. Find $\angle BCD$.



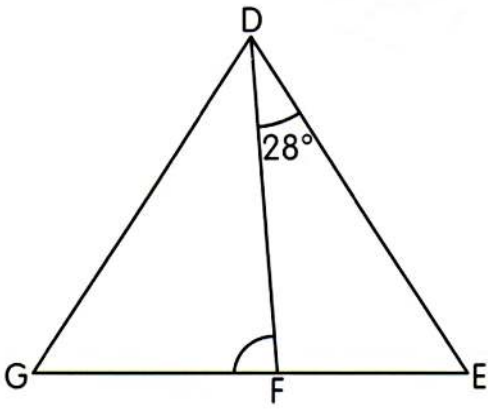
Name: **Class:** **Date:**

L3 Worksheet 6

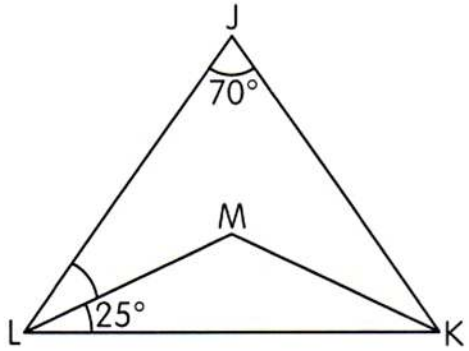
1. ACD is an isosceles triangle and AD = AC.
   Find ∠ACD.



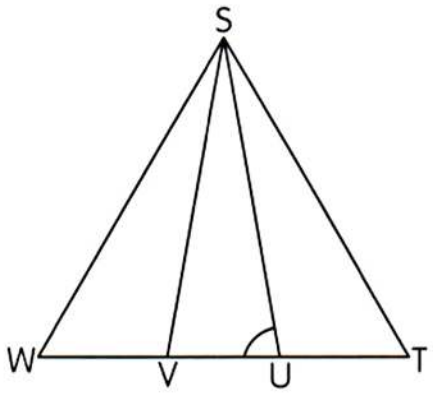
2. DEG is an equilateral triangle. Find ∠DFG.



3 JKL and MKL are isosceles triangles and JK = JL and MK = ML. Find ∠JLM.



4 STW is an equilateral triangle. SUV is an isosceles triangle.
∠VSW = ∠VSU = ∠UST. Find ∠SUV.



Name: **Class:** **Date:**

Performance Task

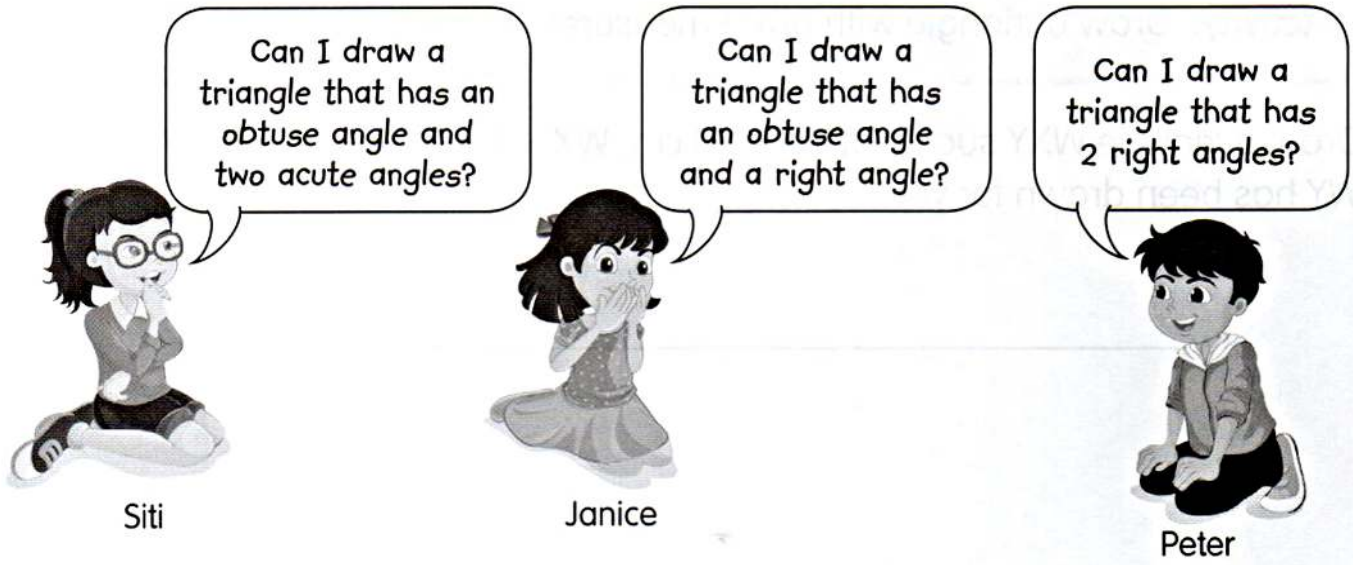
Activity: Draw a triangle with given measurements.

Draw a triangle WXY such that WY = 10 cm, WX = 7 cm and $\angle XWY = 75°$.
WY has been drawn for you.

W——————————————————————————Y

Math Journal

Which child will be able to draw his or her triangle?



Draw figures to help you explain the reasons.

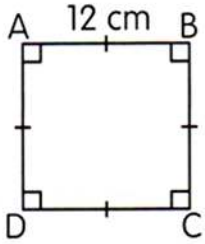
Name: Class: Date:

13 Parallelogram, Rhombus And Trapezium

Recall (Properties of a square and a rectangle)

1 Find the unknown sides of the square and the rectangle.

(a)

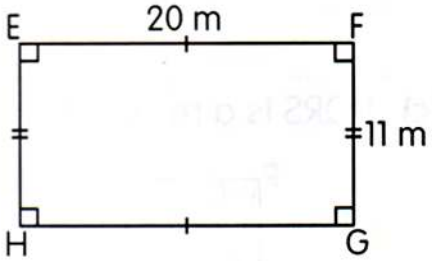


BC = _____

DC = _____

AD = _____

(b)

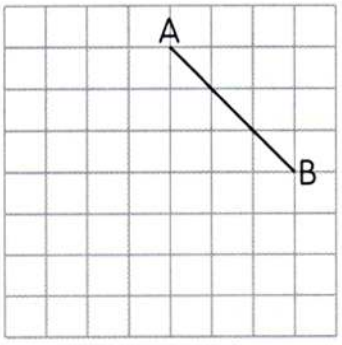


GH = _____

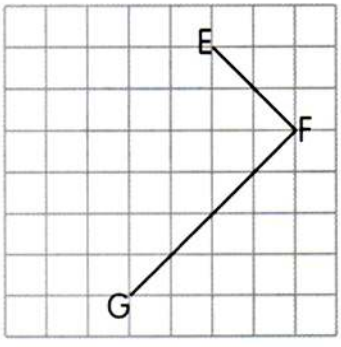
EH = _____

2 Draw the sides of the square, ABCD, and the rectangle, EFGH, to complete the figures. Name the square and rectangle.

(a)

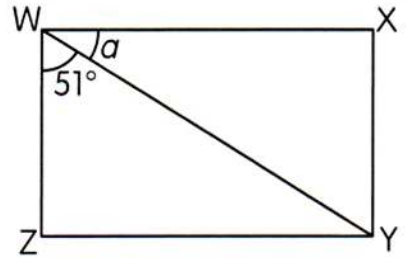


(b)



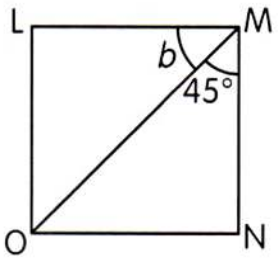
3 Find each unknown marked angle.

(a) WXYZ is a rectangle.



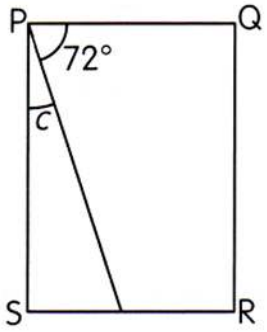
$\angle a =$

(b) LMNO is a square.



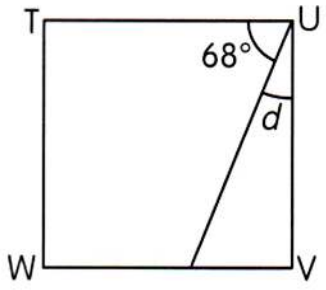
$\angle b =$

(c) PQRS is a rectangle.



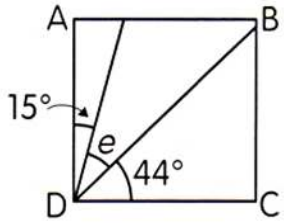
$\angle c =$

(d) TUVW is a square.



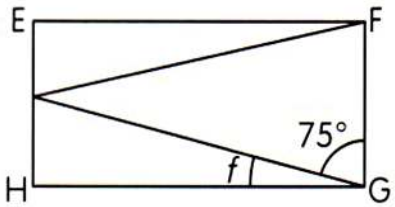
$\angle d =$

(e) ABCD is a square.



$\angle e =$

(f) EFGH is a rectangle.



$\angle f =$

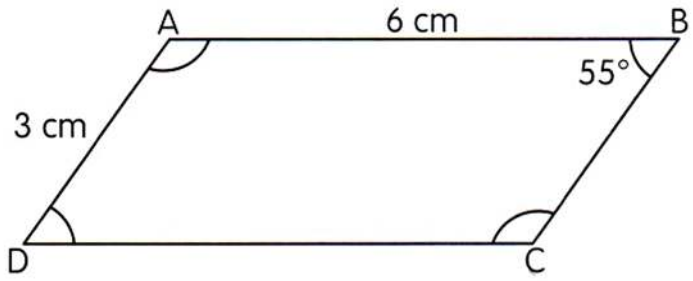
Name: Class: Date:

Properties of Parallelogram, Rhombus and Trapezium

LI Worksheet 1

1 Fill in the blanks.

(a) ABCD is a parallelogram.



BC = _____ cm

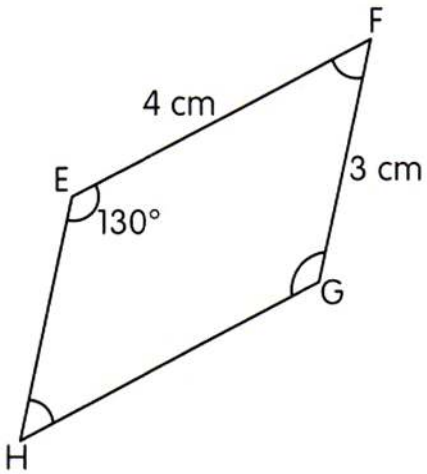
DC = _____ cm

∠ADC = _____ °

∠DAB = _____ °

∠DCB = _____ °

(b) EFGH is a parallelogram.



EH = _____ cm

HG = _____ cm

∠HGF = _____ °

∠EHG = _____ °

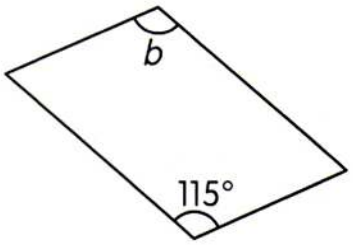
∠EFG = _____ °

2 Find the unknown marked angles in the following parallelograms.

(a)

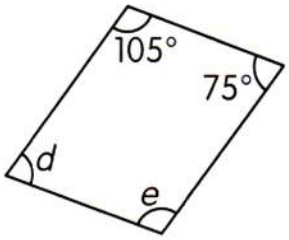
$\angle a =$ _____

(b)



$\angle b =$ _____

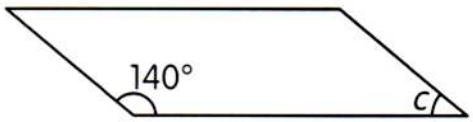
(c)



$\angle d =$ _____

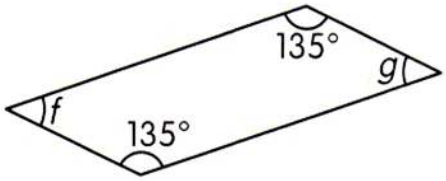
$\angle e =$ _____

(d)

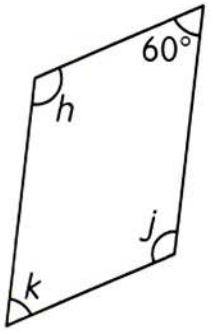


$\angle c =$ _____

(e)



(f)

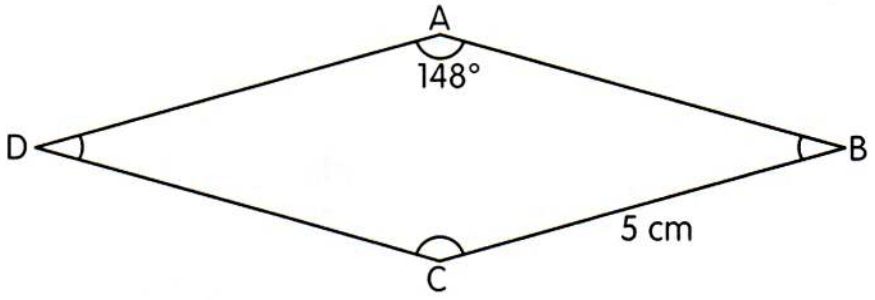


Name: **Class:** **Date:**

LI Worksheet 2

1 Fill in the blanks.

(a) ABCD is a rhombus.

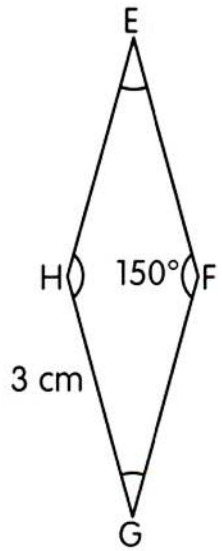


AB = _____ cm ∠ABC = _____°

AD = _____ cm ∠ADC = _____ °

CD = _____ cm ∠BCD = _____ °

(b) EFGH is a rhombus.



EF = _____ cm

EH = _____ cm

FG = _____ cm

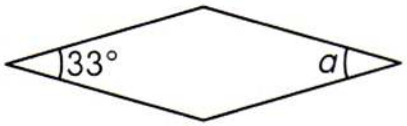
∠HEF = _____°

∠EHG = _____ °

∠HGF = _____ °

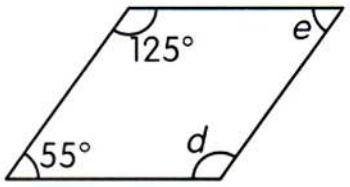
2 Find the unknown marked angles in the following rhombuses.

(a)



$\angle a =$ _____

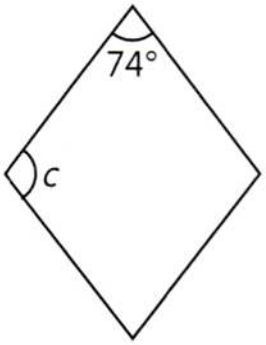
(b)



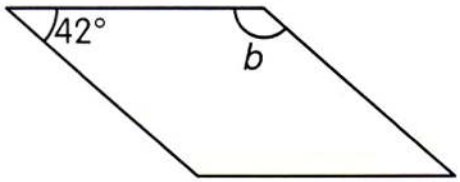
$\angle d =$ _____

$\angle e =$ _____

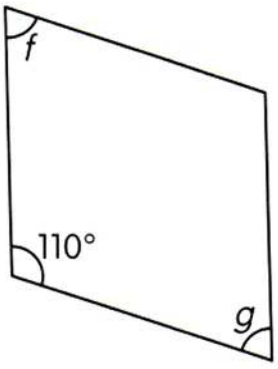
(c)



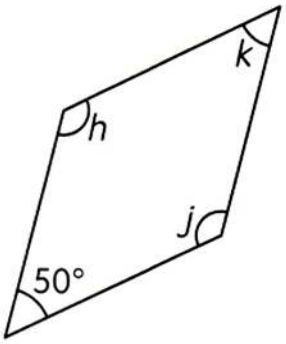
(d)



(e)



(f)

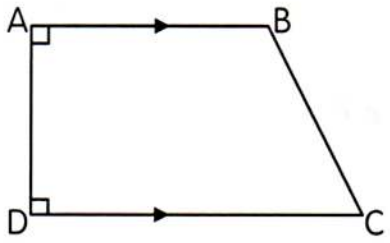


Name: Class: Date:

L1 Worksheet 3

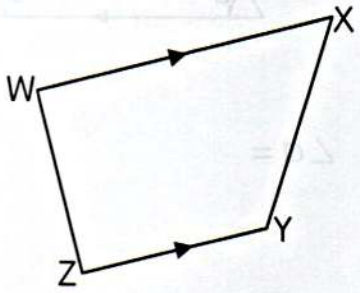
1 Name the pairs of parallel sides in the following trapeziums.

(a)



_____ // _____

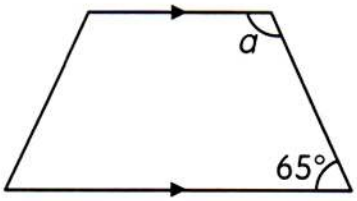
(b)



_____ // _____

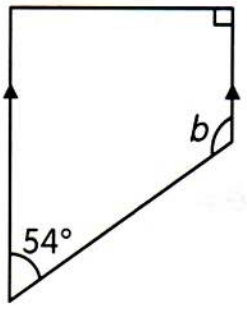
2 Find the unknown marked angles in the following trapeziums.

(a)



$\angle a =$

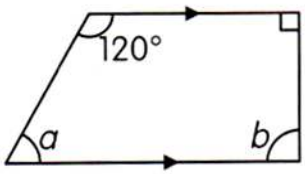
(b)



$\angle b =$

3 Find the unknown marked angles in the following trapeziums.

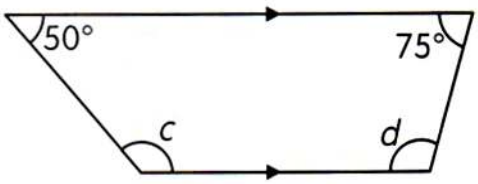
(a)



$\angle a =$

$\angle b =$

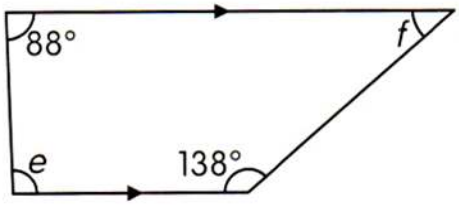
(b)



$\angle c =$

$\angle d =$

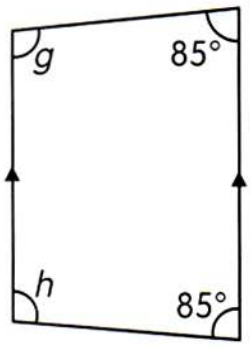
(c)



$\angle e =$

$\angle f =$

(d)



$\angle g =$

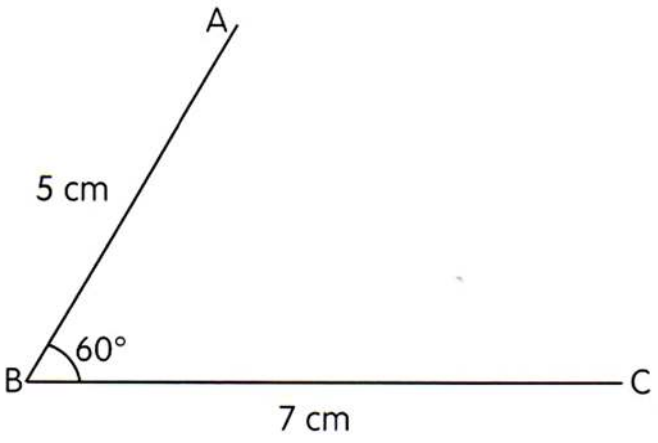
$\angle h =$

Name: Class: Date:

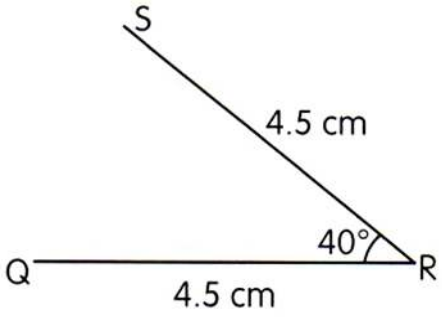
Drawing 4-Sided Figures

Worksheet 4

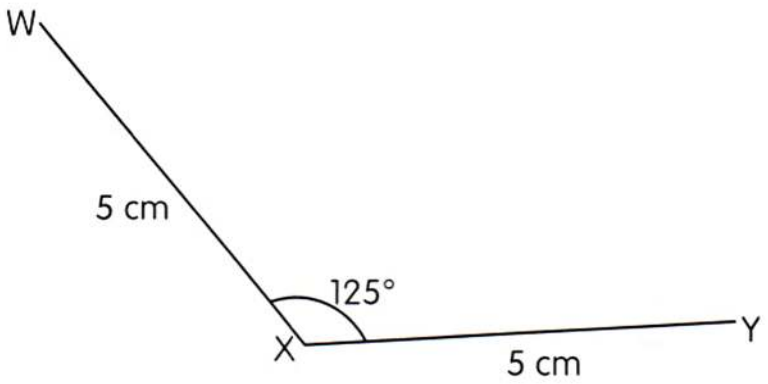
1. AB and BC are the sides of a parallelogram, ABCD. AB = 5 cm, BC = 7 cm and ∠ABC = 60°. Draw the lines AD and CD to complete the parallelogram.



2. QR and RS are the sides of a rhombus, PQRS. QR = RS = 4.5 cm and ∠QRS = 40°. Draw the lines SP and QP to complete the rhombus.



3 WX and XY are the sides of a trapezium, WXYZ. WZ is parallel to XY. WZ = 12 cm, WX = XY = 5 cm, ∠WXY = 125° and ∠XYZ = 134°. Draw the lines WZ and YZ to complete the trapezium.



Name: **Class:** **Date:**

L2 Worksheet 5

1. Draw a parallelogram ABCD in which AB = 4 cm, AD = 5 cm and ∠ABC = 35°.

Sketch

2. Draw a parallelogram EFGH in which EF = 3 cm, EH = 4 cm and ∠FEH = 130°.

Sketch

3. Draw a rhombus JKLM in which JM = 4 cm and ∠JML = 140°.

Sketch

4. Draw a trapezium PQRS in which PS // QR, PQ = 3 cm, QR = 6 cm, ∠PQR = 60° and ∠QRS = 40°.

Sketch

5. Draw a trapezium WXYZ in which WX = 5 cm, XY = 5.5 cm, WZ = 7.5 cm and ∠XWZ = 90°.

Sketch

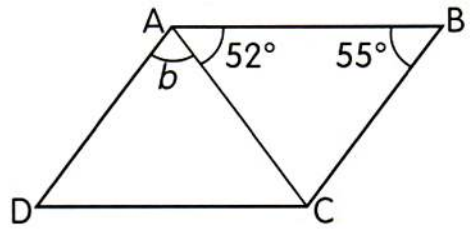
Name: Class: Date:

Finding Unknown Angles

L2 Worksheet 6

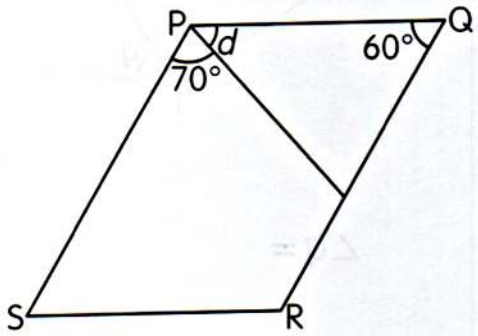
1 Find the unknown marked angles.

(a) ABCD is a parallelogram.



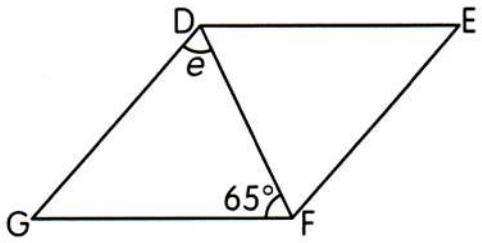
$\angle b =$

(b) PQRS is a parallelogram.



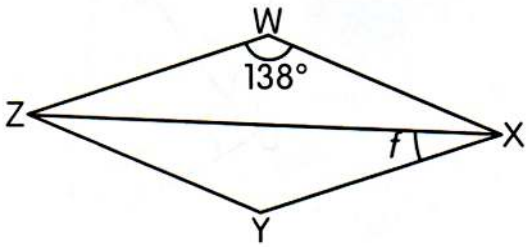
$\angle d =$

(c) DEFG is a rhombus.



$\angle e =$

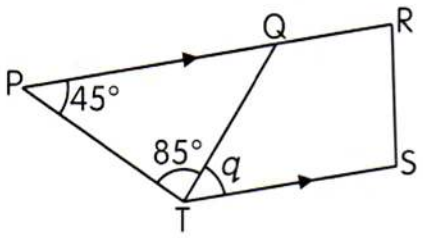
(d) WXYZ is a rhombus.



$\angle f =$

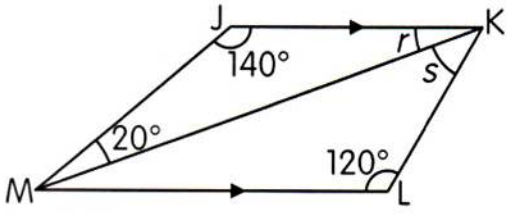
2 Find the unknown marked angles.

(a) PQRST is a trapezium.
PR is parallel to TS.



$\angle q =$

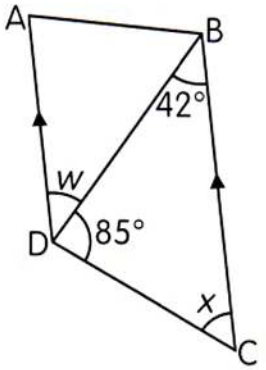
(b) JKLM is a trapezium.
JK is parallel to ML.



$\angle r =$

$\angle s =$

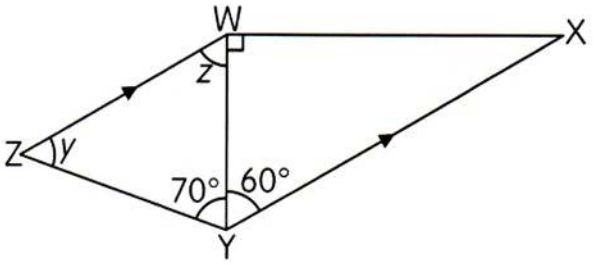
(c) ABCD is a trapezium.
DA is parallel to CB.



$\angle x =$

$\angle w =$

(d) WXYZ is a trapezium.
ZW is parallel to YX.



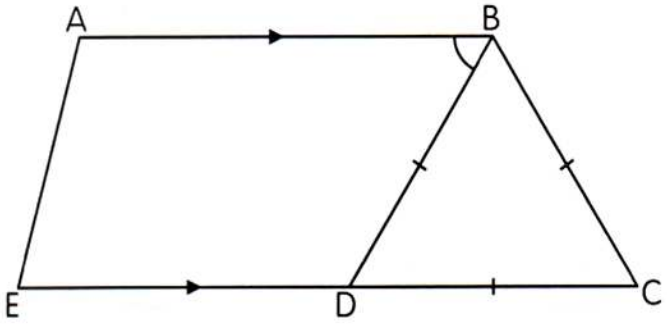
$\angle y =$

$\angle z =$

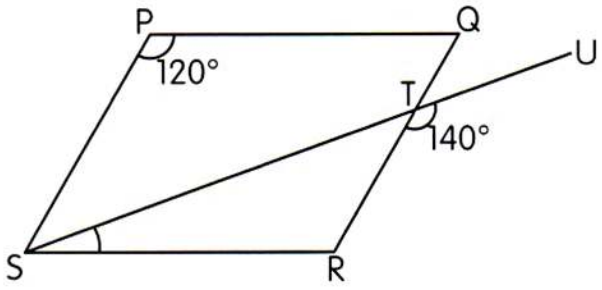
Name: **Class:** **Date:**

L3 Worksheet 7

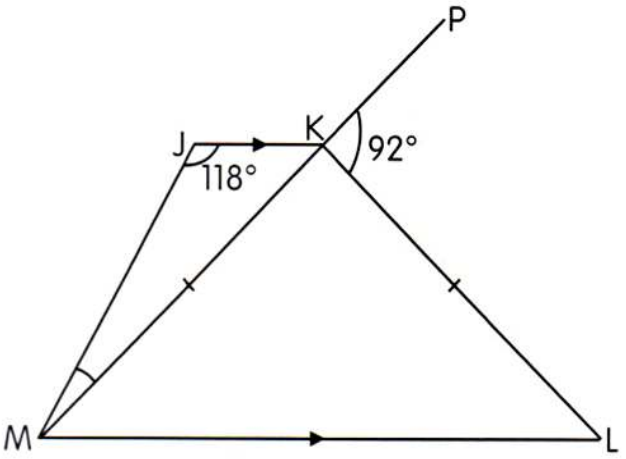
1. ABDE is a trapezium and BCD is an equilateral triangle.
Find ∠ABD.



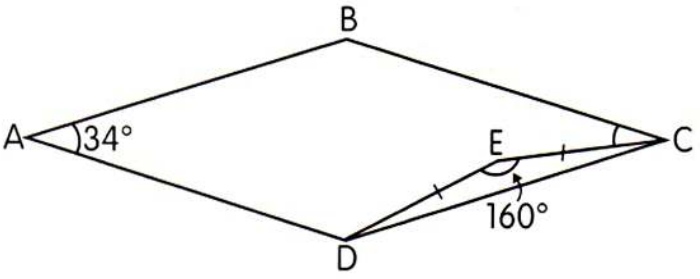
2. PQRS is a parallelogram. STU is a straight line. Find ∠RST.



3 JKLM is a trapezium with JK // ML. KLM is an isosceles triangle and KL = KM. PKM is a straight line. Find ∠JMK.



4 ABCD is a rhombus. CDE is an isosceles triangle and CE = DE. ∠DAB = 34° and ∠DEC = 160°. Find ∠BCE.



Name: Class: Date:

Performance Task

Activity: To form 4-sided figures from cut-outs of right-angled triangles.

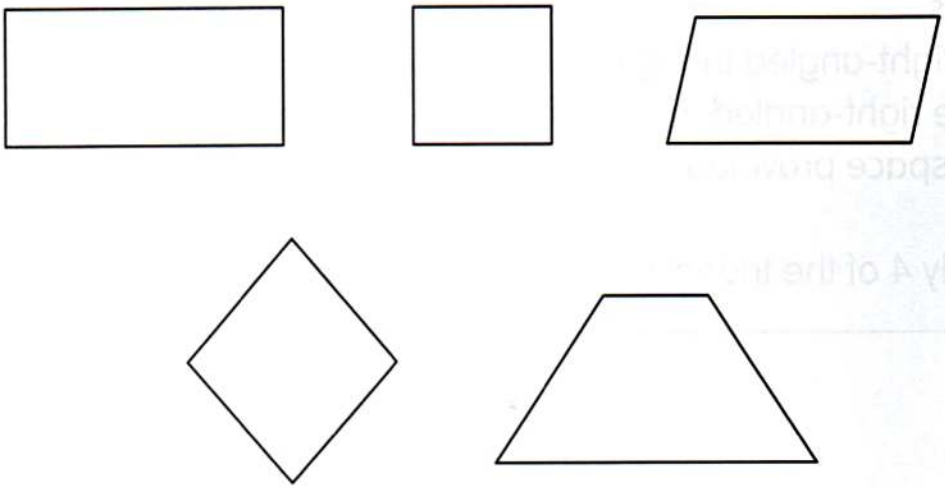
Work in pairs.
Cut out the right-angled triangles on page 203.
Then use the right-angled triangles to form the following shapes and paste them in the space provided.

(a) Use only 4 of the triangles to form a parallelogram.

(b) Use only 3 of the triangles to form a trapezium.

Math Journal

The sum of angles in a triangle is 180°.
In the 4-sided figures below, draw lines to show and explain why the sum of angles in a 4-sided figure is 180° × 2 = 360°.



Name: Class: Date:

Review 2

Section A

Work out the questions carefully.
Show your working in the space provided.

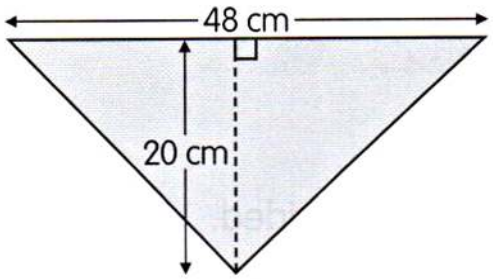
1. What is the value of $56 \div (8 - 4) \times 15 + 18$?

2. Find the value of $\frac{7}{8} \times \frac{4}{21}$. Express the answer in its simplest form.

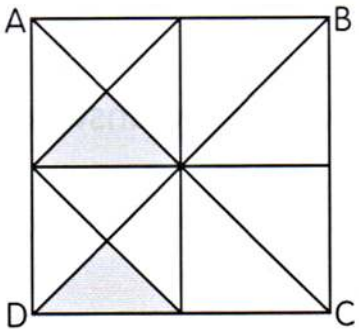
3. Fill in the missing number in the box.

   $\square : 13 = 24 : 52$

4 Find the area of the shaded triangle.



5 ABCD is a square. What percentage of the figure is shaded?



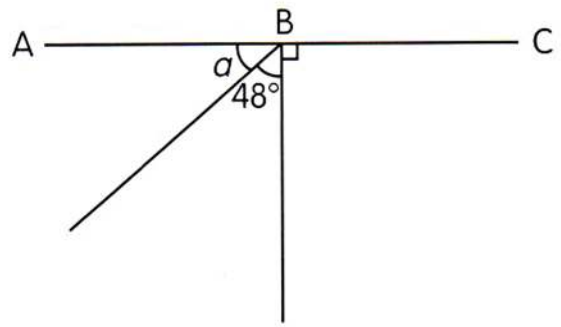
6 The average mass of 5 pupils is 36 kg. What is the total mass of the 5 pupils?

7 The table below shows the amount of money donated by each person.
On average, how much does each person donate?

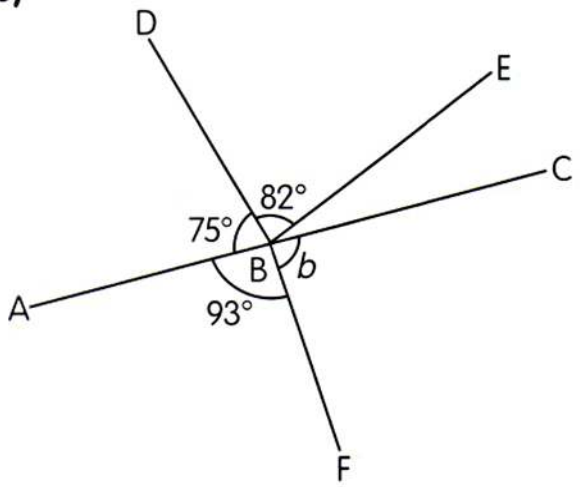
Name	Amount
Andrew	$10
Kok Meng	$12
Selvi	$8
Harlindah	$18

8 Find the unknown marked angles.
In each figure below, ABC is a straight line.

(a)

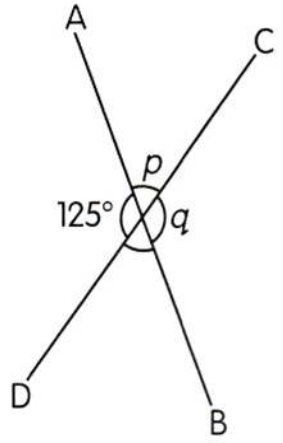


(b)

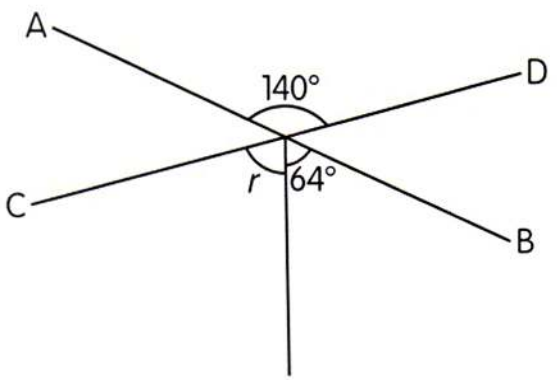


9 Find the unknown marked angles.
In each figure below, AB and CD are straight lines.

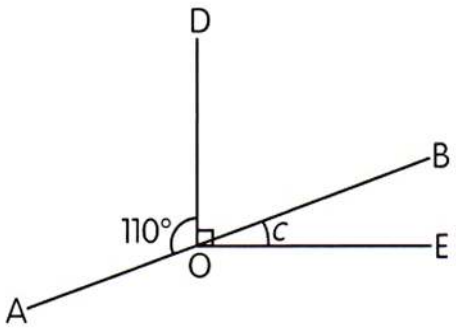
(a)



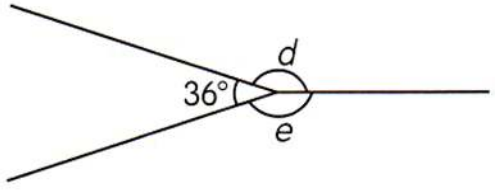
(b)



10 **(a)** In the figure, AOB is a straight line. Find $\angle c$.

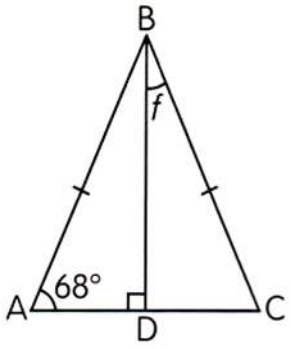


(b) In the figure, $\angle d = \angle e$. Find $\angle d$.

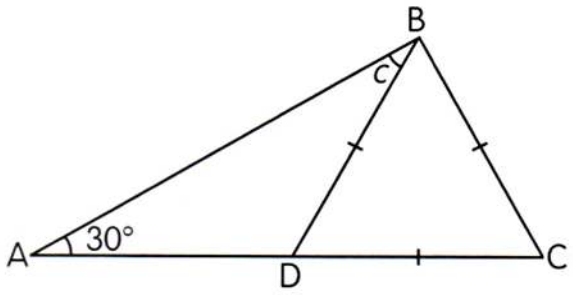


11 Find the unknown marked angles in the following figures.

(a) ADC is a straight line.

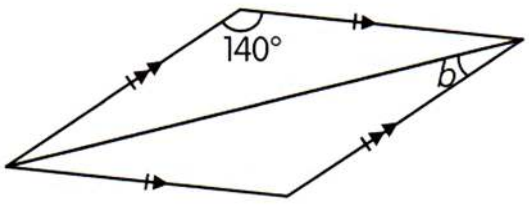


(b) ADC is a straight line.

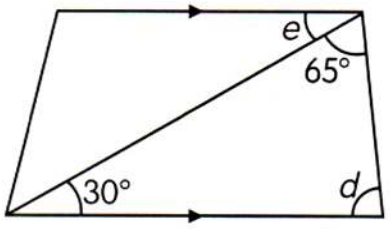


12 Find the unknown marked angles in the following figures.

(a)

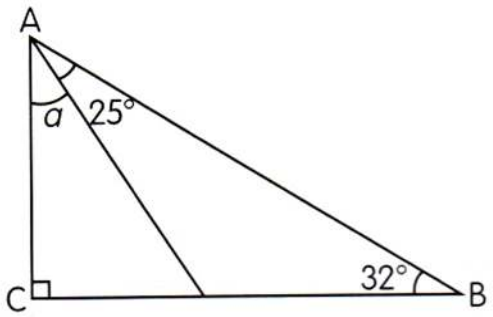


(b)

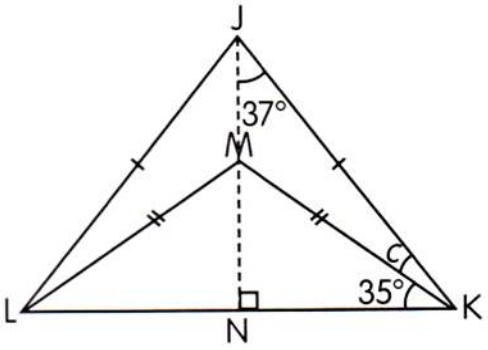


13 Find the unknown marked angles in the following figures.

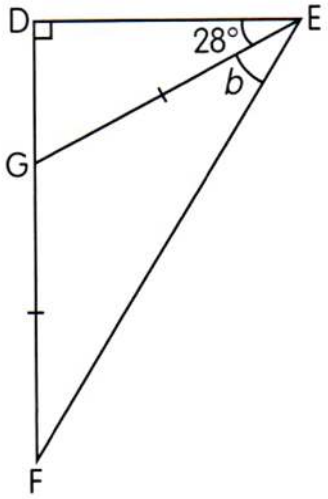
(a) ABC is a right-angled triangle.



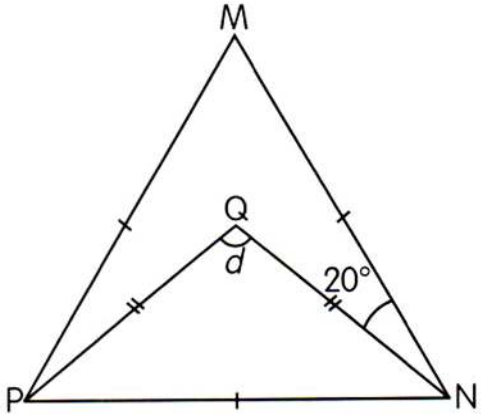
(b) JKL and MKL are isosceles triangles.



(c) DEF is a right-angled triangle. EFG is an isosceles triangle.

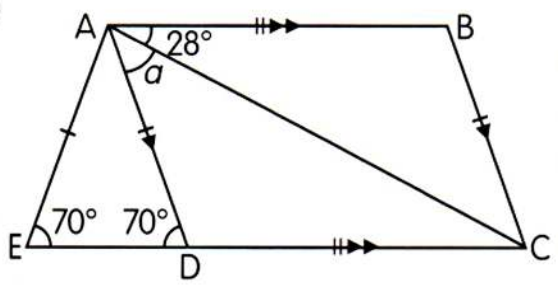


(d) MNP is an equilateral triangle. NPQ is an isosceles triangle.

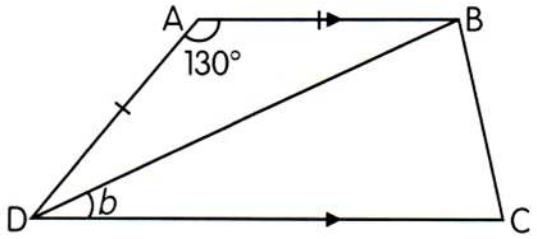


14 Find the unknown marked angles in the following figures.

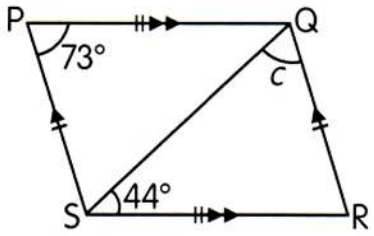
(a)



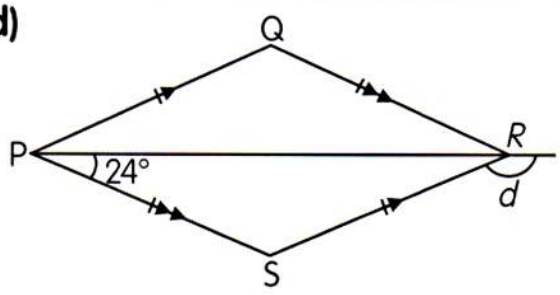
(b)



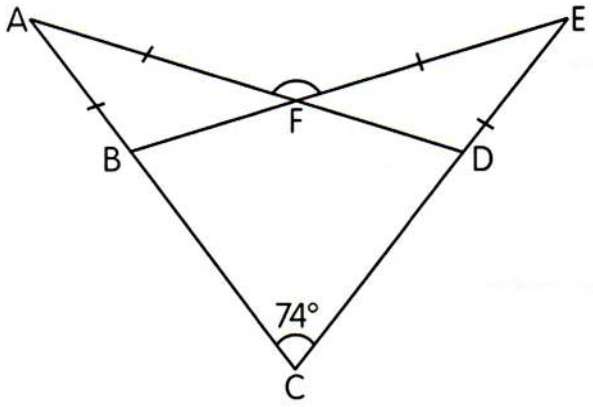
(c)



(d)



15 ACD and EBC are two identical isosceles triangles. Find ∠AFE.



Section B

Solve the word problems.
Show your working clearly in the space provided.

1. A tank has a capacity of 15 ℓ. It is filled with $9\frac{2}{5}$ ℓ of water.
How much more water is needed to fill the tank completely?

2. Mariam saved $\frac{1}{4}$ of her money and spent $\frac{5}{6}$ of the remainder on a blouse.
She had \$12 left. How much had she at first?

3. 3 girls share some money in the ratio 4 : 3 : 5. The largest share is \$85.
Find the smallest share.

4. A machine can make 150 key chains in 6 minutes. How many key chains can it make in 15 minutes?

5. A photocopier can print 750 pages every 30 minutes. How long does it take to print 4500 pages? Give your answer in hours.

6. A handphone costs $500 without GST. How much does the handphone cost if a GST of 7% is included?

7 A bank pays 2% interest per year. Mr Tay deposits $16 000 in the bank. How much will Mr Tay get altogether at the end of one year?

8 The average cost of 3 different storybooks is $11. The total cost of 2 of the books is $16.20. What is the cost of the third book?

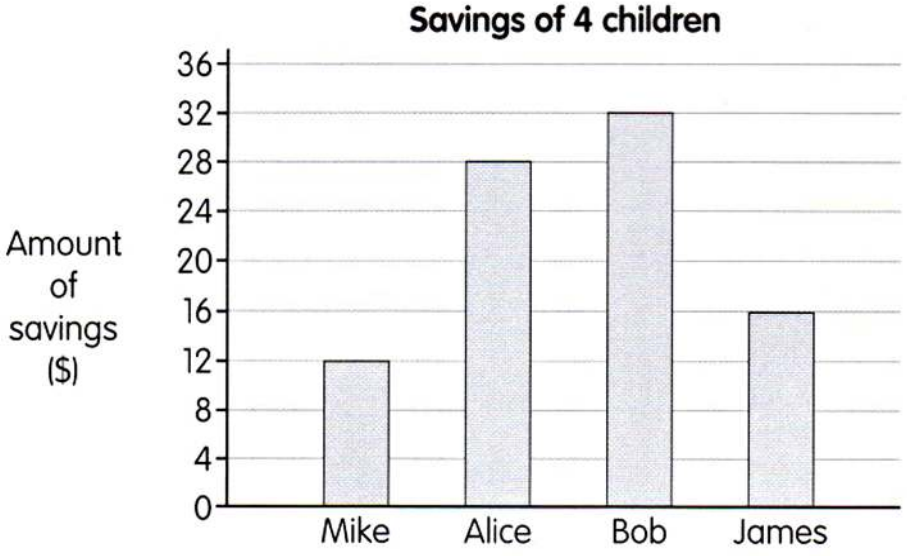
9 Mrs Lim has some buttons. The ratio of the number of red buttons to the number of blue buttons is 3 : 5. She has 14 more blue buttons than red buttons. How many buttons does she have altogether?

10 The cost of tiling 40 m^2 of floor area is $960. How much will it cost to tile 65 m^2 of floor area?

11 Janice paid $30.65 for a storybook and 6 markers. Sam paid $20.25 for an identical storybook and 2 markers. All the markers had the same price. How much did Sam pay for the storybook?

12 Peter bought 15 pens at $2.40 each. During a sale, each pen costs 40 cents less than what Peter had paid for. How many more pens could Peter buy during the sale with the same amount of money?

13 The bar graph shows the different amounts 4 children saved in a certain week. Find the average amount saved by the children.



14 Figure A and Figure B are made up of identical squares. The perimeter of Figure A is 60 cm. Find the perimeter of Figure B.

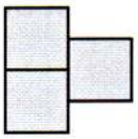


Figure A

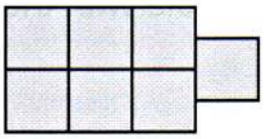
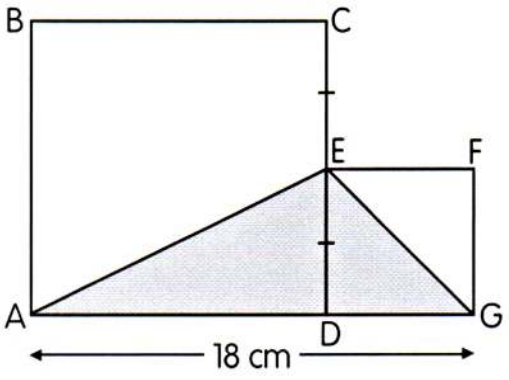
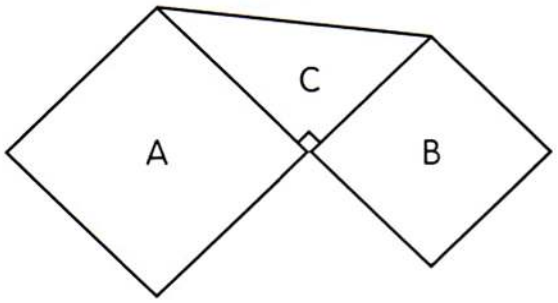


Figure B

15 The figure is made up of 2 squares, ABCD and EFGD. AG = 18 cm and CE = ED. ADG is a straight line. Find the area of triangle AEG.

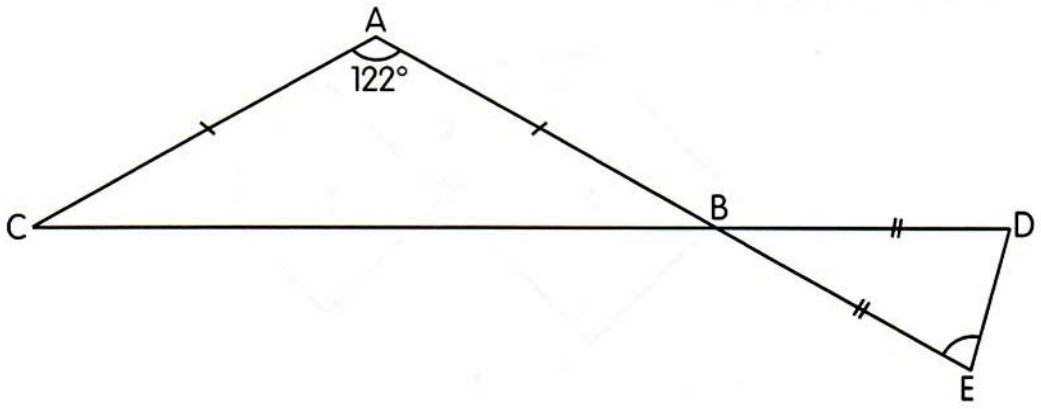


16 The figure is made up of 2 squares, A and B, and a right-angled triangle, C. The area of square A is 81 cm^2 and the area of square B is 49 cm^2. Find the area of triangle C.

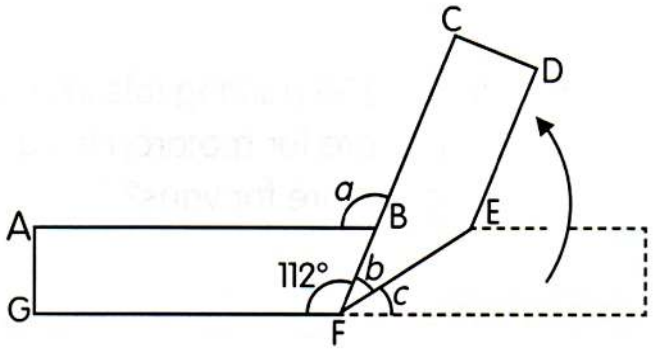


17 There are 300 parking lots in a car park. 40% of the lots are for cars, 15% of the lots are for motorcycles and the rest are for vans. How many of the parking lots are for vans?

18 ABC and BDE are isosceles triangles. AB = AC and BD = BE. ABE and CBD are straight lines. Find ∠BED.



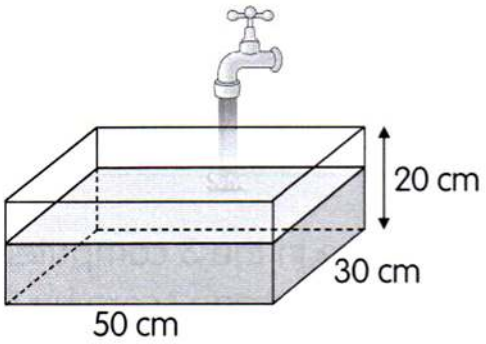
19 A rectangular strip of paper is folded as shown. Find the unknown marked angles, *a*, *b* and *c*.



20 An empty rectangular tank measures 50 cm by 30 cm by 20 cm. It is being filled with water flowing from a tap at a rate of 2 ℓ per minute.

(a) What is the capacity of the tank in litres?

(b) How many minutes will it take to fill the tank to its brim?



21 The table shows Dave's scores in 3 computer games.

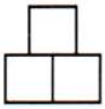
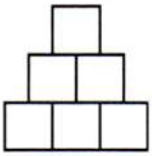
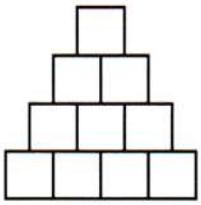
	Score
Game 1	100 points
Game 2	106 points
Game 3	118 points

(a) What is his average score in the 3 computer games?

(b) He wants to improve his average score by 5 points in the next game. How many points must he score in the next game?

22 The number of boys, girls and adults at a carnival is 288. The number of boys is twice the number of adults. There are 12 more boys than girls. Find the number of girls at the carnival.

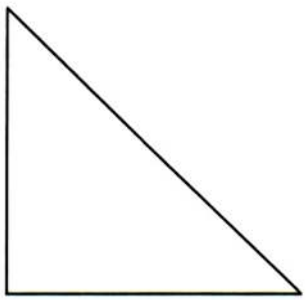
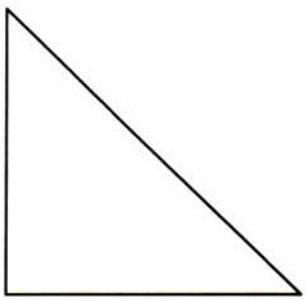
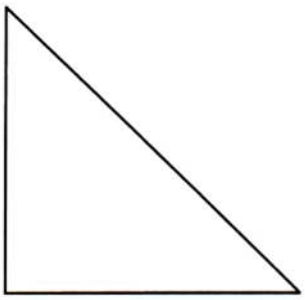
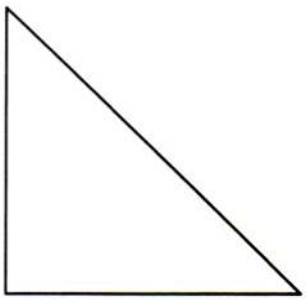
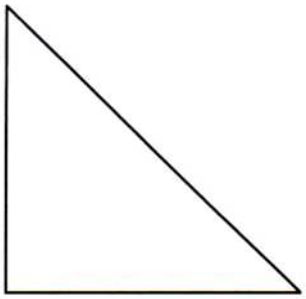
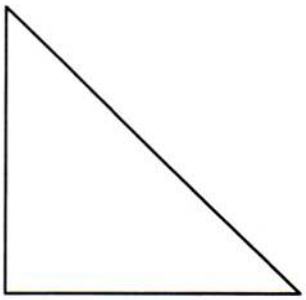
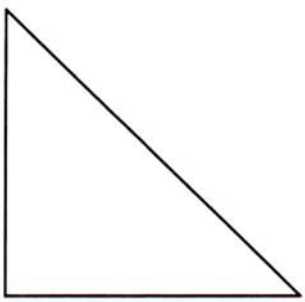
23 The figures below are made up of identical squares. Each square has sides 2 cm each. The perimeters of figures 1, 2 and 3 are as shown.

Figure 1	Figure 2	Figure 3	Figure 4	Figure 5
				
Perimeter = 8 cm	Perimeter = 16 cm	Perimeter = 24 cm	?	?

(a) Draw Figure 5.
(b) Find the perimeters of figures 4 and 5.
(c) How many squares are there in Figure 100?

Cut-Outs

Refer to page 181. Cut out these shapes.
The triangles are identical.

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