# NUMBER 1

MARK

1

**1.** Find the following numbers.

**Example**
This number has three hundreds, five tens and nine units.
**Answer: 359**

(a) This number has six hundreds, eight tens and four units.

(b) This number has two hundreds, one ten and five units.

(c) This number has four hundreds, no tens and nine units.

(d) This number has three thousands, seven hundreds, four tens and eight units.

(e) This number has five thousands, no hundreds, nine tens and no units.

(f) This number has seven tens, eight hundreds and one unit.

(g) This number has six tens, three thousands, four units and two hundreds.

(h) This number has five units, no hundreds, eight thousands and no tens.

**2.** Arrange the following sets of numbers in order from the **smallest** to the **largest**:

(a) 578 1218 709 89 781

____ ____ ____ ____ ____

(b) 231 321 123 312 213 132

____ ____ ____ ____ ____ ____

**3.** Arrange the following sets of numbers in order from the **largest** to the **smallest**:

(a) 747 81 850 2050 205

____ ____ ____ ____ ____

(b) 978 789 897 879 987 798

____ ____ ____ ____ ____ ____

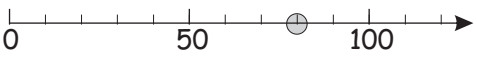
**4.** (a) Use all four digits shown here to write the **largest** possible number.

**3 8 1 7**

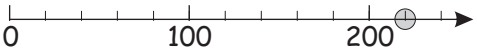
(b) Use all the four digits shown to write the **smallest** possible number.

**5.** Write the number shown by the dot on each number line below.

(a)




(b)



**6.** Write the following numbers in numeral form.

> **Example:**
> **Two hundred and sixteen** in numeral form is **216**

(a) Five hundred and nineteen.

(b) Seven hundred and eighty-four.

(c) Three thousand, two hundred and ninety-five.

(d) Twenty-seven thousand, eight hundred and one.

**7.** Write the following numbers in words.

(a) 640

(b) 5914

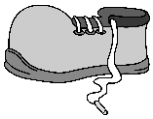
(c) 12 753

(d) 57 908

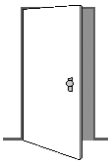
**8.** There are 16 numbers between 0 and 50 hidden in this puzzle. Find the numbers and write them as **words** below the puzzle.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| F | I | F | T | E | E | N | T | H | C |
| O | D | O | E | N | Y | P | H | L | R |
| U | A | R | M | I | W | X | I | S | Z |
| R | H | T | N | I | N | E | R | N | Q |
| T | B | Y | T | R | I | H | T | J | T |
| W | G | T | X | J | K | L | E | W | F |
| O | O | N | E | V | E | L | E | F | I |
| K | Q | E | M | N | C | L | N | I | V |
| R | H | W | J | U | V | D | K | Y | E |
| A | C | T | B | E | I | G | H | T | F |

**9.** Write the numbers that **rhyme** with the objects below.

(a) 

(b) 

(c) 

(d) 

# NUMBER 2

MARK

2

1. The ten longest rivers in the world are listed below in alphabetical order.

| River | Length |
|---|---|
| Amazon | 6436 km |
| Amur | 4415 km |
| Congo | 4373 km |
| Huang He | 5463 km |
| Lena | 4399 km |
| Mackenzie | 4241 km |
| Mekong | 4183 km |
| Nile | 6693 km |
| Ob-Irtysh | 5410 km |
| Yangtze | 6378 km |

In the table below list these rivers in order from the **longest** to the **shortest**.

| River | Length |
|---|---|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

2. **Add 10** to each of the following numbers.

(a) 28 ☐ (b) 364 ☐

(c) 8 ☐ (d) 3540 ☐

(e) 291 ☐ (f) 1990 ☐

3. **Add 100** to each of the following numbers.

(a) 537 (b) 2306 (c) 5988

☐ ☐ ☐

4. **Subtract 10** from each of the following numbers.

(a) 75 ☐ (b) 864 ☐

(c) 16 ☐ (d) 2953 ☐

(e) 419 ☐ (f) 2907 ☐

5. **Subtract 100** from each of the following numbers.

(a) 478 (b) 2306 (c) 1099

☐ ☐ ☐

**6.** (a) List all the **even** numbers between 97 and 105.

_____

(b) List all the **odd** numbers between 396 and 402.

_____

**7.** (a) Using all the digits shown here, list all possible **odd** numbers.

**8**
**9 5**

_____

(b) Using all these digits, list all possible **even** numbers.

_____

**8.** (a) From the numbers below, circle in **red** the two numbers that differ by **10**.
(b) From the numbers below, circle in **blue** the two numbers that differ by **100**.

**797 597 709 607 906 609 589 698 679**

**9.** Complete the following calculations.

(a)
$$\begin{array}{r} 34 \\ +\ 55 \\ \hline \end{array}$$

(b)
$$\begin{array}{r} 4087 \\ 61 \\ +\ 289 \\ 2903 \\ \hline \end{array}$$

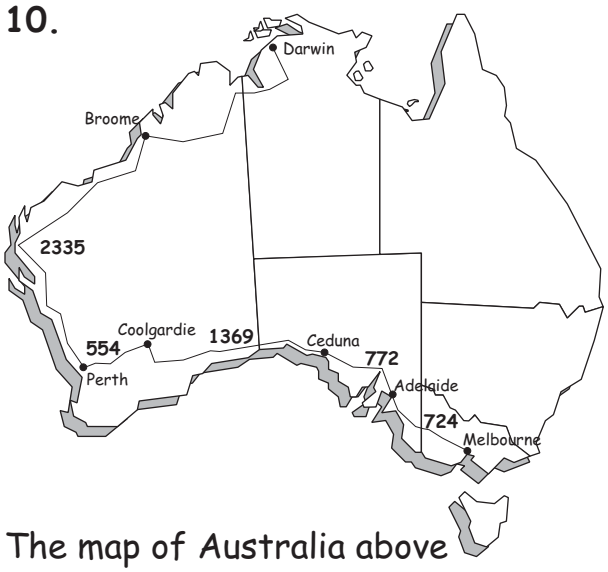
(c)
$$\begin{array}{r} 5173 \\ +\ 486 \\ \hline \end{array}$$

(d)
$$\begin{array}{r} 68 \\ -\ 25 \\ \hline \end{array}$$

(e)
$$\begin{array}{r} 346 \\ -\ 258 \\ \hline \end{array}$$

(f)
$$\begin{array}{r} 6025 \\ -\ 691 \\ \hline \end{array}$$

**10.**




The map of Australia above includes several cities and towns. Most of the distances between them are shown (in kilometres - km).

(a) Use the distances shown to find the distance between Melbourne and Perth.

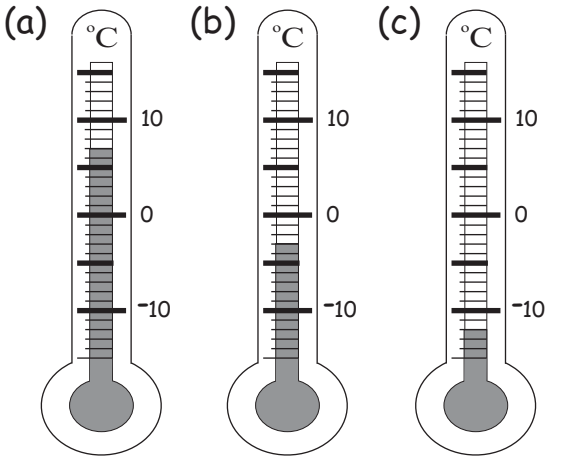
(b) The distance between Perth and Darwin is 4166 km. The distance between Perth and Broome is shown. Calculate the distance between Broome and Darwin.

# NUMBER 3

MARK

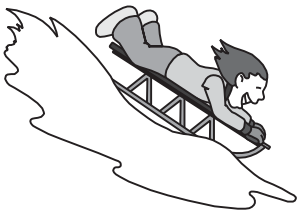
3

**1.** Write the temperature shown on the following thermometers.

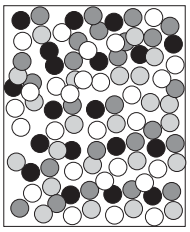



**2.** (a) The minimum temperature overnight at Mt. Hotham was ¯6°C. The following day the temperature reached a maximum of 7°C.
By how many degrees did the temperature rise?

(b) The temperature then dropped by 10° to the following night's minimum. What was the minimum temperature on the following night?



**3.** Merryn and Onslo guessed the number of lollies that were in a large jar.
Merryn guessed 76.
Onslo guessed 96.
There were 88 lollies in the jar.

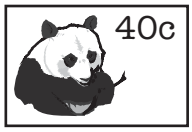


(a) Who was closest with their guess?

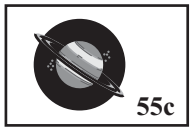
(b) Merryn and Onslo divided the lollies into two piles.
Merryn counted 41 in her pile.
How many lollies were in Onslo's pile?

(c) How many lollies should Onslo give to Merryn so they both have the same number?

**4.** Aaron's job was to put the stamps on parcels to be posted.
He had three different stamp sizes to use:
40 cents, 50 cents and 55 cents.








He could make many different stamp amounts using combinations of these stamps.

**Examples**
**80c** = 40c + 40c
**$1.45** = 40c + 50c + 55c
**$1.90** = 40c + 40c + 55c + 55c

Find the combinations of stamps needed to make the following stamp totals.

(a) $1.40

_____

(b) $1.95

_____

(c) $2.20

_____

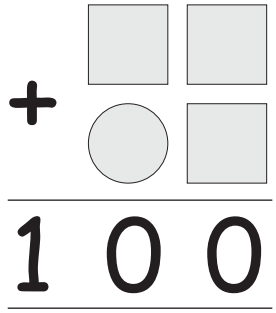
(d) $3.50

_____

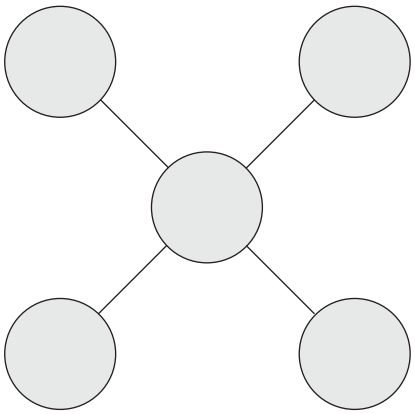
(e) $4.15

_____

**5.** Place numbers in the squares and circle to make this addition correct.
The numbers in squares are the same but different to the number in the circle.




**6.** Fill in the circles in the diagram below with the numbers 1, 2, 3, 4 and 5 so that each line adds to the same total.



**7.** Rearrange the numbers and symbols below to make an equation that is correct.

**Example**

| 1 | 2 | 3 | 4 | 7 | + | = |
|---|---|---|---|---|---|---|

These could be rearranged to form:

| 2 | 4 | + | 7 | = | 3 | 1 |
|---|---|---|---|---|---|---|

| 3 | 4 | 5 | 6 | 9 | + | = |
|---|---|---|---|---|---|---|
| | | | | | | |

# NUMBER 4

MARK

# 4

**1.** Complete the following multiplication tables.

| × | 5 | 3 | 10 | 8 | 4 | 7 | 2 | 6 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| 4 | | | | | | | | | |
| 8 | | | | | | | | | |
| 9 | | | | | | | | | |
| 10 | | | | | | | | | |
| 2 | | | | | | | | | |
| 7 | | | | | | | | | |
| 3 | | | | | | | | | |
| 5 | | | | | | | | | |
| 6 | | | | | | | | | |

| × | | | | | 7 | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 6 | | 18 | | 21 | | 9 | | 12 |
| | | 30 | | 60 | | 48 | | 54 | |
| | 16 | | 48 | | 56 | | 24 | | 32 |
| | | 10 | | 20 | | 16 | | 18 | |
| | 20 | | 60 | | 70 | | 30 | | 40 |
| 7 | | 35 | | 70 | | 56 | | 63 | |
| | 8 | | 24 | | 28 | | 12 | | 16 |
| | | 45 | | 90 | | 72 | | 81 | |
| | 10 | | 30 | | 35 | | 15 | | 20 |

**2.** Complete the following calculations.

(a)
$$\begin{array}{r} 324 \\ \times\ 2 \\ \hline \\ \hline \end{array}$$

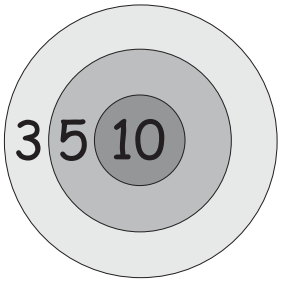
(b)
$$3\overline{)9360}$$

**3.** Complete the following calculations.

(a)
$$\begin{array}{r} 967 \\ \times\ 4 \\ \hline \\ \hline \end{array}$$

(b)
$$6\overline{)3468}$$

**4.** **Five** darts are thrown at the dartboard shown here. (Assume all darts hit the board) The total score is equal to the score of the five darts added.




(a) What is the largest total score that could be made? ☐

(b) What is the smallest total score that could be made? ☐

(c) How could the following total scores be made?

**Example** 28 = 3 + 5 + 5 + 5 + 10

(i) 17 _____

(ii) 19 _____

(iii) 33 _____

(iv) 35 _____

(v) 36 _____

**5.** In Australian rules football a **goal** is worth **six** points and a **behind** is worth **one** point.

**Example**
A team scores 10.8
This means 10 goals and 8 behinds
Its total score = $10 \times 6 + 8 \times 1$
= **68 points**

(a) Find the total score for the following goals and behinds.

(i) 9.4

(ii) 15.10

(b) The scores by the Cats and Magpies in a game were:

| Cats 20.12 | Magpies 10.10 |
|---|---|

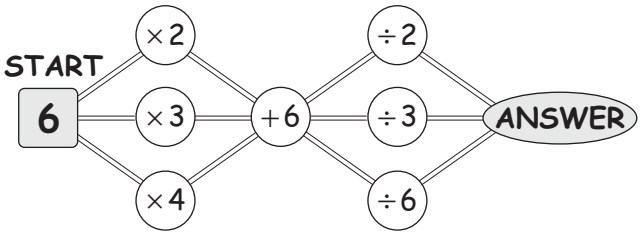
How many more points than the Magpies did the Cats score?

(c) The Saints had a total score of 70 points.
If they scored 4 behinds, how many goals did they score?

**6.** Meredith runs a riding school and owns 24 horses.
(a) She wants to buy horseshoes for all of the horses.
How many horseshoes will she need to buy?

(b) Meredith could only buy 76 horseshoes.
How many horses will she be able to put these new horseshoes onto?

**7.** On the diagram below:
(a) Colour in **red** the path that would give an answer of **4**.
(b) Colour in **blue** the path that would give an answer of **9**.




**8.** Fill in the missing numbers in this calculation. The two numbers are different.

$$\begin{array}{r} 3\,\square\,6 \\ \times\ \square \\ \hline 1730 \\ \hline \end{array}$$

# NUMBER 5

MARK

5

**1.** Start with the number shown and complete each line writing the answer each time.

| | |
|---|---|
| Starting number | 6 |
| Add 5 | |
| Subtract 7 | |
| Multiply by 5 | |
| Divide by 10 | |
| Add 12 | |
| Divide by 7 | |
| Multiply by 8 | |
| Add 8 | |
| Divide by 6 | |
| Subtract 4 | |

**2.** Find the answer to the following problem **two ways**.

**Example** 26 + 38

(a) 26 + 38
= 20 + 6 + 30 + 8
= 20 + 30 + 6 + 8
= 50 + 14
= **64**

(b)
$$\begin{array}{r} 26 \\ +\ 38 \\ \hline \mathbf{64} \end{array}$$

(a) 43 + 39

(b)

**3.** Write the answers to the following problems in the boxes shown.

(a)

| | | | |
|---|---|---|---|
| 3 + 4 | | 8 - 5 | |
| 30 + 40 | | 80 - 50 | |
| 300 + 400 | | 800 - 500 | |

(b)

| | | | |
|---|---|---|---|
| 2 × 3 | | 4 × 5 | |
| 2 × 30 | | 40 × 5 | |
| 2 × 300 | | 400 × 5 | |

(c)

| | | | |
|---|---|---|---|
| 2 × 10 | | 5 × 100 | |
| 20 × 10 | | 50 × 100 | |
| 2 × 300 | | 500 × 100 | |

(d)

| | | | |
|---|---|---|---|
| 20 × 30 | | 60 × 40 | |
| 50 × 50 | | 80 × 50 | |
| 90 × 60 | | 90 × 200 | |

**4.** Round the following numbers to the nearest 10.

| | | |
|---|---|---|
| (a) 21 | (b) 38 | (c) 63 |
| (d) 124 | (e) 7 | (f) 278 |

**5.** Round the following numbers to the nearest 100.

(a) 280 (b) 365 (c) 731

(d) 76 (e) 649 (f) 1269

**6.** Find an approximate answer to the following problems by rounding the numbers to the nearest 10 first.

**Example:** 52 + 79
= 50 + 80 (after rounding)
= **130**

(a) 39 + 64

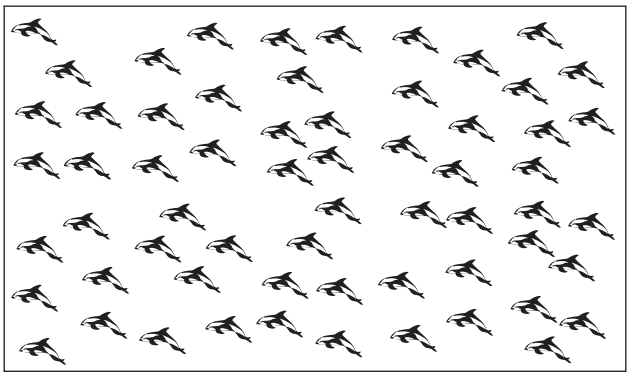
(b) 81 - 48

(c) 37 × 13

(d) 58 × 33

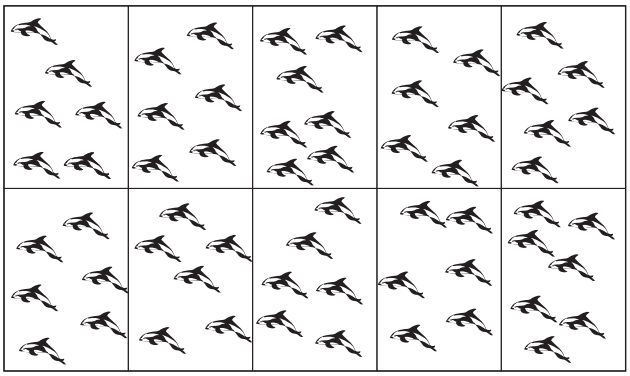
**7.** Shane weighs 48 kg.
Mandy weighs 39 kg.
They wanted to ride in a toy car that could not carry more than 90 kg.
Would Shane and Mandy be able to ride together in the toy car?

**8.** Xavier took a photo of a pod of dolphins. The photo is shown below.



(a) Guess how many dolphins are in the photo.

Xavier then drew a grid on the photo as shown below.



(b) How many rectangles are in the grid?

(c) Count how many dolphins are in one rectangle of the grid.

(d) Use these two figures to find an approximation for the number of dolphins.

(e) Count the dolphins to find out exactly how many are in the pod.

# FRACTIONS 1

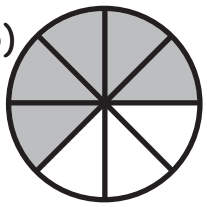
MARK

6

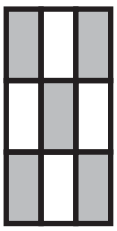
**1.** What fraction of each of the following shapes is shaded?

(a)

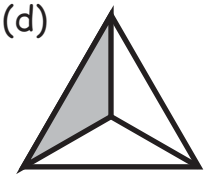
(b)



(c)

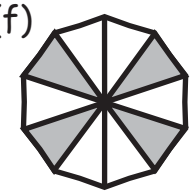


(d)



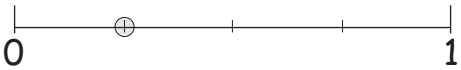
(e)

(f)



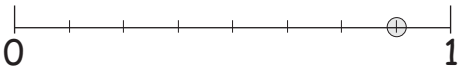
**2.** What fraction is shown by the dot on each of the number lines below.

(a)

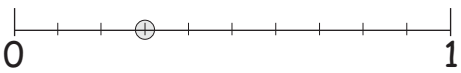



(b)

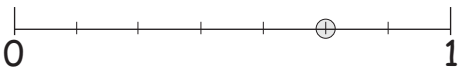

(c)




(d)




(e)




**3.** Write these fractions in words.

**Example:** $\frac{2}{5}$ is **two-fifths**

(a) $\frac{7}{8}$ _____

(b) $\frac{9}{10}$ _____

(c) $\frac{3}{4}$ _____

(d) $\frac{2}{3}$ _____

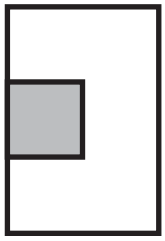
**4.** Write these fractions in numeral form.

(a) three-tenths (b) five-sixths

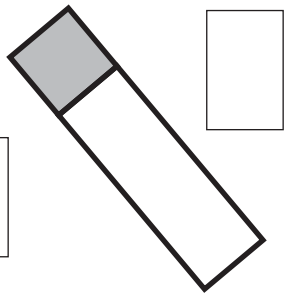
**5.** Use a ruler to measure the length of the box below.
Use this measurement to help you colour in one-fifth of the box red, two-fifths yellow and two-fifths green.

**6.** Measure the shapes below and find out what fraction of each shape is shaded.

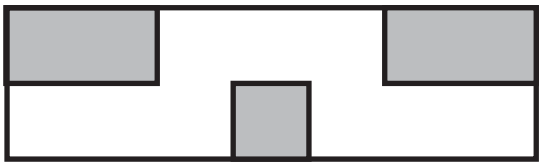
(a)



(b)



(c)

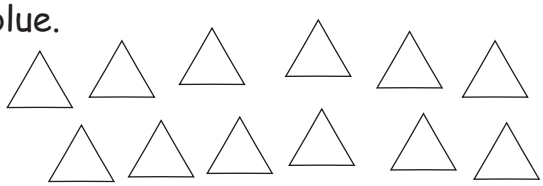


**7.** Three-fifths of a class were girls. What fraction of the class was boys?

**8.** There were 11 boys in a soccer team. Three of the boys were left-footed. What fraction of the team is left-footed.

**9.** In a basketball team there were two left-handers and five right-handers. What fraction of the team was left-handers?

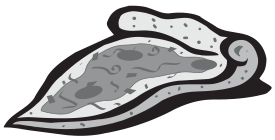
**10.** (a) Colour in one-third of the triangles below red and one-quarter blue.



(b) What fraction of the triangles is not coloured in?

**11.** A pizza is cut into six equal parts.

(a) What fraction of the pizza is each part?



(b) If the pizza cost $12, what would each part cost?

**12.** Find the following amounts.

(a) $\frac{1}{5}$ of $10

(b) $\frac{2}{5}$ of $10

(c) $\frac{3}{5}$ of $10

(d) $\frac{4}{5}$ of $10

**13.** Find fractions hidden in these sentences.

**Example**

Harley took his tent hiking in the bush.

(a) The snake had lethal fangs.

(b) The man in the shop wore a blue tie.

(c) Ken lived at 56 Wongarthi Rd.

(d) Jayden played in a tennis event held every Saturday morning.

(e) The Vet had to weigh the cat before giving it a tablet.

(f) Kellie had to clean up the fluff if the cat came into her room.

# FRACTIONS 2

MARK

# 7

**1.** Find the following amounts.

(a) $\frac{1}{6}$ of 18

(b) $\frac{2}{6}$ of 18

(c) $\frac{3}{6}$ of 18

(d) $\frac{4}{6}$ of 18

(e) $\frac{5}{6}$ of 18

**2.** Find the following amounts.

(a) $\frac{1}{2}$ of 16

(b) $\frac{1}{3}$ of 12

(c) $\frac{1}{5}$ of 30

(d) $\frac{1}{4}$ of 24

(e) $\frac{1}{6}$ of 42

(f) $\frac{1}{10}$ of 70

(g) $\frac{1}{3}$ of 66

(h) $\frac{1}{4}$ of 72

(i) $\frac{1}{8}$ of 120

(j) $\frac{1}{9}$ of 180

**3.** Find the following amounts.

(a) $\frac{2}{3}$ of 18

(b) $\frac{3}{4}$ of 20

(c) $\frac{2}{5}$ of 30

(d) $\frac{5}{6}$ of 12

(e) $\frac{3}{7}$ of 21

(f) $\frac{5}{8}$ of 32

(g) $\frac{4}{5}$ of 100

(h) $\frac{3}{4}$ of 80

**4.** A block of chocolate had 20 pieces. Four friends divided the block evenly.

(a) What fraction of the block did each of the friends get?

(b) How many pieces of chocolate did each friend get?

**5.** How many half hour TV shows could be taped on to a three hour video tape?

**6.** Jayme had a two hour video tape.
(a) How many minutes are on the video tape?

(b) One-fifth of the tape was used? How many minutes of the tape have been used?

**7.** If apples cost $2 per kilogram(kg), find the cost of the following amounts of apples.

(a) $\frac{1}{2}$ kg (b) $2\frac{1}{2}$ kg

**8.** Noela bought $\frac{1}{4}$ kg of licorice for 40c.
Find the cost of the following amounts of licorice.

(a) 1 kg (b) $2\frac{1}{2}$ kg

**9.** Hayley had to mix 20 litres of paint. One-fifth of the paint was yellow, two-fifths was red and the rest was white.
(a) What fraction of the paint was white?

(b) How many litres of each paint would Hayley need?

Yellow Red White

**10.** Mrs. Chen had the job of cutting up the oranges for half time in a local soccer game.
She cut 15 oranges into quarters.
How many quarters did she have?

**11.** Mrs. Garcia had the job of cutting up the oranges for half time in a local basketball game.
There were 12 players in the game and she had to provide three pieces for each player.
How many oranges should she cut into quarters?

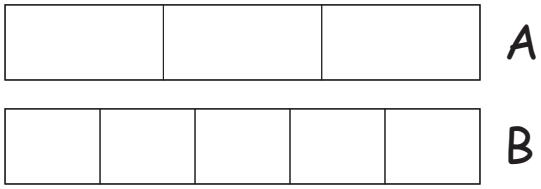
# FRACTIONS 3

MARK

# 8

**1.** (a) Colour in $\frac{1}{3}$ of block A below.

(b) Colour in $\frac{2}{5}$ of block B below.



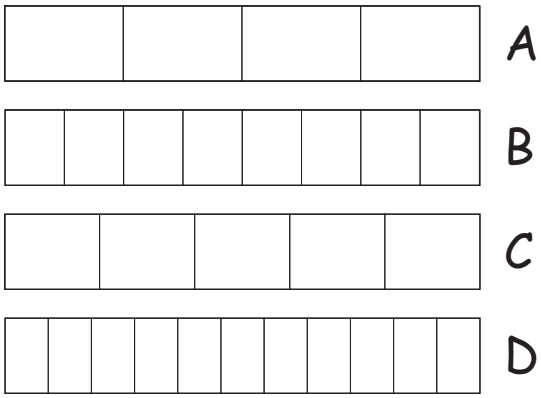

(c) Which fraction is bigger ($\frac{1}{3}$ or $\frac{2}{5}$)?

**2.** (a) Colour in $\frac{3}{4}$ of block A below.

(b) Colour in $\frac{5}{8}$ of block B below.

(c) Colour in $\frac{4}{5}$ of block C below.

(d) Colour in $\frac{7}{11}$ of block D below.

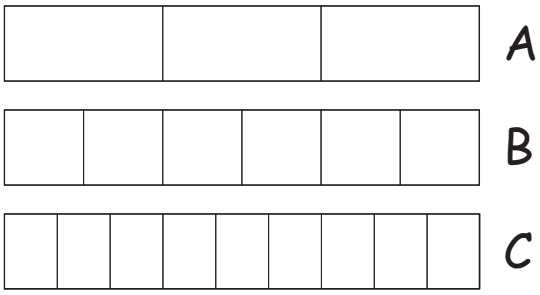



(e) Arrange these fractions in order from the smallest to the largest.

**3.** (a) Colour in $\frac{1}{3}$ of block A below.

(b) Colour in $\frac{2}{6}$ of block B below.

(c) Colour in $\frac{3}{9}$ of block C below.




(d) What can you say about these three fractions.

(e) Write another fraction that is equivalent to $\frac{1}{3}$.

**4.** Write two fractions that are equivalent to $\frac{1}{2}$.

**5.** Complete the following sentence by filling in the gap.

One-half = _____ quarters

**6.** Arrange the following numbers in order from the smallest to the largest. $\frac{2}{3}$ $1\frac{3}{5}$ $\frac{1}{4}$ $1\frac{1}{3}$ $\frac{1}{2}$

**7.** Connect the fractions that are equal. (One is already done)

| | |
|---|---|
| $\frac{1}{2}$ | $1\frac{2}{5}$ |
| $\frac{7}{5}$ | $\frac{5}{2}$ |
| $\frac{3}{4}$ | $\frac{4}{5}$ |
| $2\frac{1}{2}$ | $\frac{2}{4}$ |
| $\frac{8}{10}$ | $\frac{3}{2}$ |
| $1\frac{1}{2}$ | $\frac{6}{8}$ |
| $\frac{7}{4}$ | $1\frac{3}{4}$ |

**8.** Complete the following patterns.

(a) $\frac{1}{2}$, 1, $1\frac{1}{2}$, ____, ____, ____.

(b) $\frac{2}{5}$, $\frac{4}{5}$, $1\frac{1}{5}$, ____, ____, ____.

(c) $\frac{2}{3}$, $1\frac{1}{3}$, 2, ____, ____, ____.

**9.** Write the answers to the following problems.

(a) $\frac{1}{3} + \frac{1}{3}$

(b) $\frac{1}{5} + \frac{2}{5}$

(c) $\frac{3}{7} + \frac{2}{7}$

(d) $\frac{1}{4} + \frac{3}{4}$

**10.** $2\frac{3}{5} + 3\frac{4}{5}$

**11.** Jacqui used a $1\frac{1}{2}$ litre jug to fill her fish bowl.
The fish bowl holds 30 litres.
How many jugs full of water will Jacqui need to fill the fish bowl?

**12.** Nathan owned several hens.
His hens were sitting on 20 eggs.
Three-quarters of the eggs hatched.
Of the chickens that hatched two-thirds were white and the others were brown.
How many brown chickens were there?

# DECIMALS 1

MARK

# 9

**1.** Complete the table below.
One line is completed as an example.

| Number | 100 | 10 | 1 | • $\frac{1}{10}$ | $\frac{1}{100}$ |
|---|---|---|---|---|---|
| 3.5 | | | 3 | 5 | |
| 18.6 | | | | | |
| 9.47 | | | | | |
| 10.05 | | | | | |
| 375.6 | | | | | |
| 201.84 | | | | | |

**2.** Complete the following.

**Example** 621.57 has:
6 hundreds
2 tens
1 unit
5 tenths
7 hundredths

(a) 8.6 has:

8 _____

6 _____

(b) 65.19 has:

6 _____

5 _____

1 _____

9 _____

(c) 736.4 has:

7 _____

3 _____

6 _____

4 _____

**3.** Write the following numbers.

**Example**
This number has three hundreds, eight tens, five units and two tenths. **385.2**

(a) This number has four tens, nine units and six tenths. [ ]

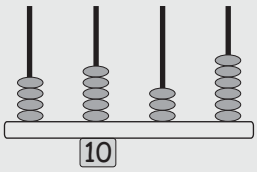
(b) This number has eight units, one tenth and five hundredths. [ ]

(c) This number has six hundreds, no tens, seven units and three tenths. [ ]

(d) This number has two tenths, one ten, eight units and nine hundredths. [ ]

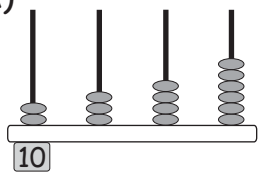
**4.** What number is shown on each spike abacus below. The place value of one of the spikes is given for each abacus.

**Example**

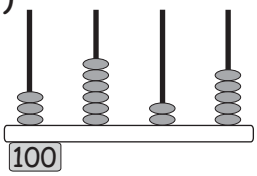



The number shown on this spike abacus is **453.6**

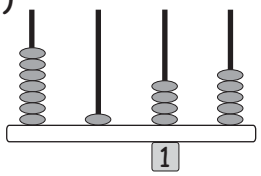
(a)



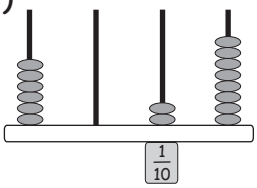

(b)



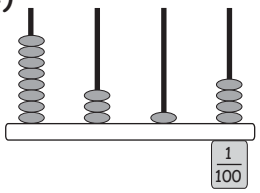

(c)



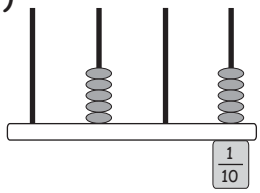

(d)




(e)




(f)




**5.** Write the following as decimal numbers.

**Example:** $6 + \frac{2}{10} = \mathbf{6.2}$

(a) $5 + \frac{7}{10}$

(b) $3 + \frac{2}{10} + \frac{9}{100}$

(c) $8 + \frac{4}{100}$

(d) $\frac{6}{100} + 5 + \frac{7}{10}$

**6.** Arrange the following sets of numbers in order from the smallest to the largest.

(a) 9.3 21.8 6.8 3.5 12.6

____ ____ ____ ____ ____

(b) 63.2 8.9 0.71 124.6 4.35

____ ____ ____ ____ ____

**7.** The times that four swimmers took to swim 50 metres in a race are shown below.

W. Hale - 32.58 seconds
S. Hark - 31.78 seconds
B. Ream - 32.29 seconds
T. Rout - 31.40 seconds

List the swimmers in order from the fastest to the slowest.

_____

_____

_____

_____

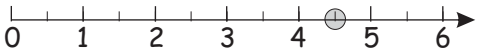
# DECIMALS 2

MARK

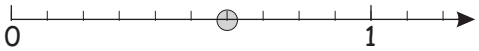
# 10

**1.** Write the number shown by the dot on each of the following number lines.

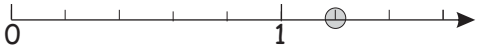
(a)




(b)

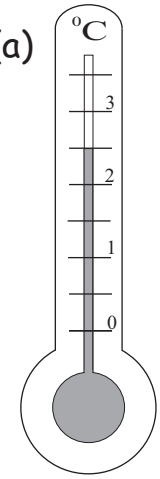



(c)

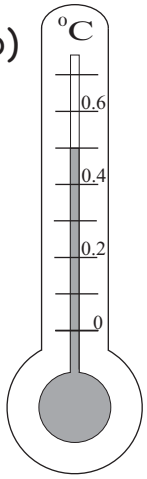



**2.** Read the temperature shown on each thermometer below.

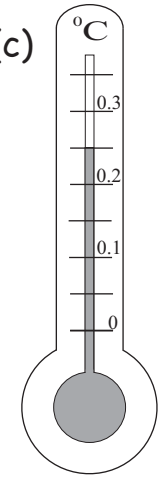
(a)




(b)




(c)




**3.** **Add one tenth** to each of the following numbers.

(a) 3.6 (b) 8.34

(c) 19.2 (d) 7.05

**4.** **Add one hundredth** to each of the following numbers.

(a) 8.62 (b) 12.43

(c) 9.7 (d) 2.69

**5.** Complete the following patterns.

(a) 0.4 0.5 0.6 0.7 ___ ___ ___.

(b) 0.5 1.0 1.5 2.0 ___ ___ ___.

(c) 0.2 0.4 0.6 0.8 ___ ___ ___.

(d) 1.6 2.0 2.4 2.8 ___ ___ ___.

**6.** Write the following fractions as decimal numbers.

(a) $\frac{1}{2}$ (b) $\frac{3}{10}$

(c) $3\frac{1}{2}$ (d) $4\frac{7}{10}$

(e) $\frac{27}{100}$ (f) $8\frac{39}{100}$

**7.** Connect the decimals and fractions that are equal.

| | |
|---|---|
| 0.4 • | • $2\frac{6}{100}$ |
| 0.26 • | • $\frac{4}{100}$ |
| 1.07 • | • $1\frac{7}{100}$ |
| 1.7 • | • $\frac{4}{10}$ |
| 2.06 • | • $\frac{17}{100}$ |
| 2.6 • | • $\frac{26}{100}$ |
| 0.04 • | • $2\frac{6}{10}$ |
| 0.17 • | • $1\frac{7}{10}$ |

**8.** Round the following numbers to the nearest **unit**.

(a) 3.7 (b) 5.29

**9.** Round the following numbers to the nearest **tenth**.

(a) 2.68 (b) 7.07

**10.** Change one letter of the word **TENTH** to make the following objects.

(a) Something you would find in camping grounds.

____ ____ ____ ____ ____

(b) Something you would find in your mouth.

____ ____ ____ ____ ____

**11.** Rearrange the following numbers to make the year that Australia decided to change to the metric system of measurement.

7 1 0 9

____ ____ ____ ____

# DECIMALS 3

MARK

# 11

**1.** Find the answer to the following problems.

(a)
$$\begin{array}{r} 62.5 \\ +\ 23.4 \\ \hline \end{array}$$

(b)
$$\begin{array}{r} 23.6 \\ +\ 54.8 \\ \hline \end{array}$$

(c)
$$\begin{array}{r} 7.83 \\ +\ 6.25 \\ \hline \end{array}$$

(d)
$$\begin{array}{r} 5.67 \\ +\ 4.33 \\ \hline \end{array}$$

(e)
$$\begin{array}{r} 86.9 \\ -\ 42.5 \\ \hline \end{array}$$

(f)
$$\begin{array}{r} 67.1 \\ -\ 32.6 \\ \hline \end{array}$$

(g)
$$\begin{array}{r} 9.33 \\ -\ 4.75 \\ \hline \end{array}$$

(h)
$$\begin{array}{r} 7.53 \\ -\ 5.44 \\ \hline \end{array}$$

**2.** Find the answer to the following problems.

(a) 6.7 + 8.8

(b) 29.7 + 35.2

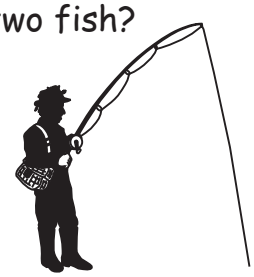
(c) 256.89 + 67.16 + 38.05

(d) 9.5 - 6.2

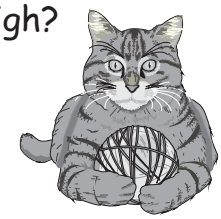
(e) 57.4 - 28.7

(f) 457.43 - 256.87

**3.** James caught two fish.
One weighed 3.8 kg.
The other weighed 2.7 kg.
What is the total weight of the two fish?



**4.** Cassie wanted to find the weight of her cat so she could give it some tablets.
While holding her cat she stood on scales. The total weight of Cassie and her cat was 52.8 kg.
Cassie weighed 46.3 kg.
What did Cassie's cat weigh?



**5.** Michael bought these items for his lunch.

| | |
|---|---|
| Sandwich | ($1.65) |
| Muffin | ($1.20) |
| Juice | ($1.45) |

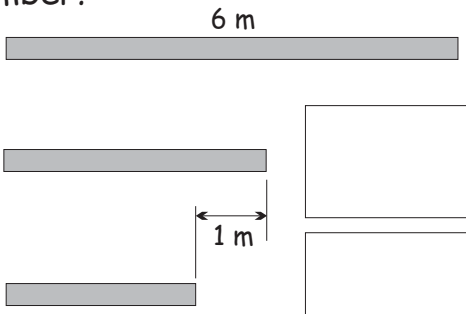
(a) What is the total cost of Michael's lunch?

(b) How much change will Michael get from $10?

**6.** The tallest man ever was Robert Wadlow who was 2.72 metres tall.
(a) Find out how tall your teacher is.

(b) How much taller than your teacher was Robert Wadlow?

**7.** William had a length of timber that was 6 metres long.
He cut it into two pieces and measured one to be one metre longer than the other.
How long were the two pieces of timber?




**8.** Use a calculator to find the answers to the following problems.

(a) 54.863 + 234.79 - 179.562

(b) 54.85 × 27.4

(c) What is the total cost of 25 CDs that each cost $35.95?

# PERCENTAGES

MARK

# 12

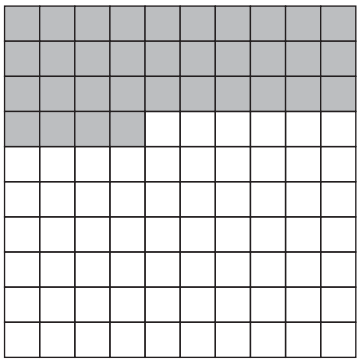
**1.** Fill in the gaps in the following statements.

(a) $\frac{18}{100}$ = _____ % (b) $\frac{73}{100}$ = _____ %

(c) 78 % = $\frac{\quad}{100}$ (d) 9 % = $\frac{\quad}{100}$

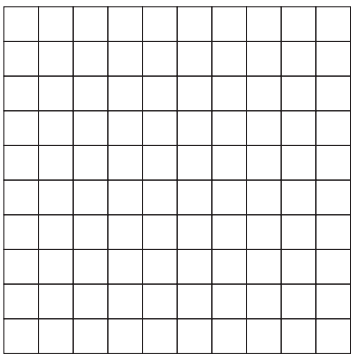
**2.** (a) What **fraction** of the grid below is shaded?

(b) What **percentage** of the grid below is shaded?



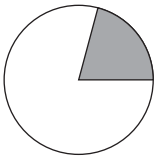
(c) What **percentage** of the grid is **not** shaded?

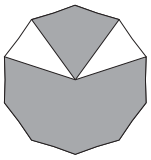
**3.** Colour in 27% of the grid below.



**4.** Circle the best estimate of the percentage of each of the following shapes that is shaded?

(a)  20% 50% 80%

(b)  20% 50% 80%

(c)  20% 50% 80%

**5.** Circle the best estimate of the percentage of each of the shapes in question 4 that is **not** shaded?

(a) 20% 50% 80%

(b) 20% 50% 80%

(c) 20% 50% 80%

**6.** 40% of the students in a class were boys.
What percentage of the class were girls?

**7.** A fruit juice was made using oranges and apples.
65% of the drink was orange juice.
What percentage of the drink was apple juice?

**8.** 25% of Australia's population live in Victoria.
34% of Australia's population live in New South Wales.
(a) What percentage of Australia's population live in the rest of Australia?

(b) On the map above colour in Victoria blue.
(c) Colour in New South Wales red.
(d) What is the capital of Victoria?

(e) What is the capital of New South Wales?

(f) Find out the population of Australia?

**9.** Connect the pairs of terms that are equal.
One pair is connected as an example.

| | |
|---|---|
| $\frac{1}{2}$ | 80% |
| $\frac{1}{100}$ | 50% |
| 0.8 | 75% |
| 0.57 | 20% |
| $\frac{3}{4}$ | 33% |
| $\frac{6}{10}$ | 1% |
| 0.2 | 25% |
| $\frac{33}{100}$ | 60% |
| $\frac{1}{4}$ | 57% |

**10.** Colour in the box below that has the bottom half that is a correct reflection of the top half.

| | | | |
|---|---|---|---|
| 50% | 50% | 50% | 50% |
| 20% | 50% | 20% | 50% |

# SHAPES 1

MARK

# 13

**1.** Next to the objects below write if they are usually **horizontal** or **vertical**.

| **Example** | **Floor** | horizontal |
|---|---|---|

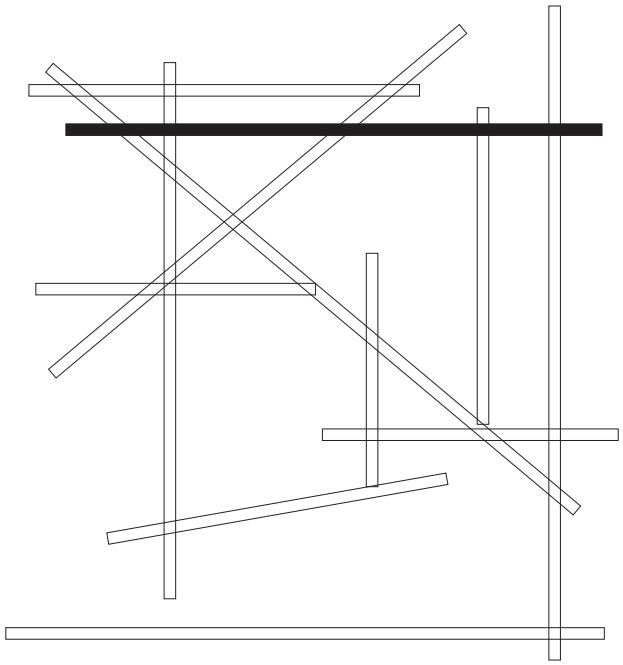
(a) Wall _____

(b) Bed _____

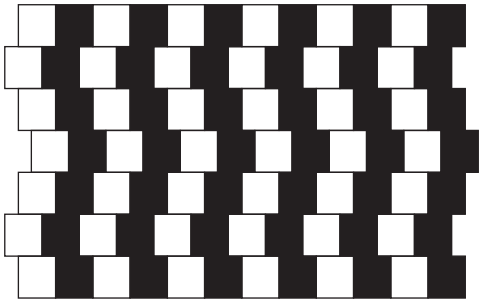
(c) Flagpole _____

(d) Desk top _____

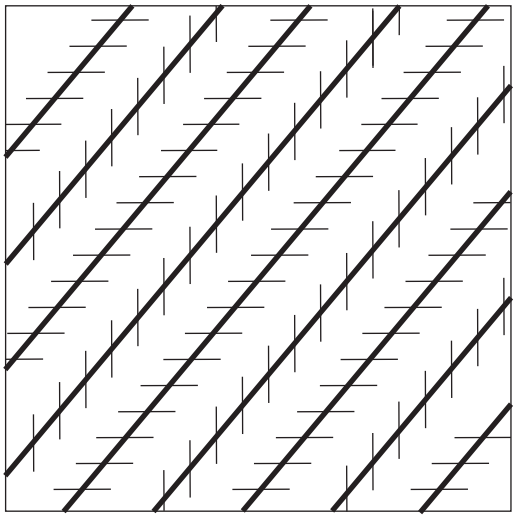
**2.** (a) Colour in **red** all the lines that are **parallel** to the **black** line in the diagram below.
(b) Colour in **blue** all the lines that are **perpendicular** to the **black** line.



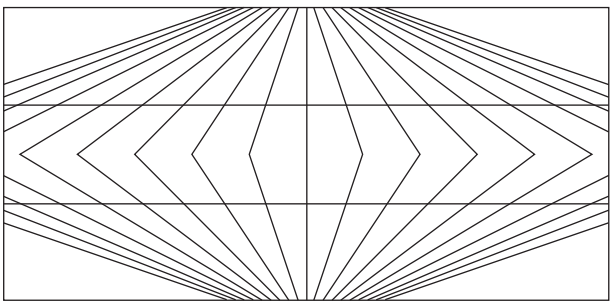
**3.** Are the horizontal lines in this diagram parallel?



**4.** Are the dark lines in the diagram below parallel?



**5.** Are the two horizontal lines in the diagram below parallel?



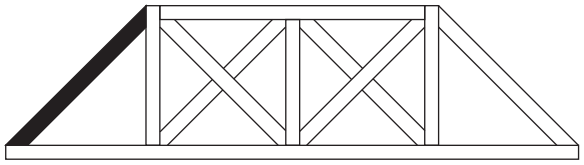
**6.** The diagram below is a bridge. One of the bridge members is coloured in black.

(a) Colour in **black** all the bridge members that are parallel to this one.

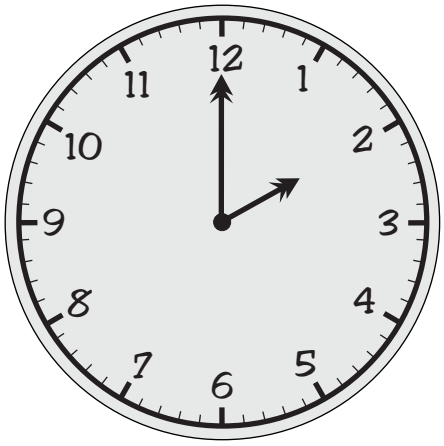
(b) Colour in **yellow** all the bridge members that are perpendicular to the black one.

(c) Colour in **red** all the horizontal bridge members.

(d) Colour in **blue** all the vertical bridge members.



**7.** (a) What time is shown on the clock below?




(b) Is the small angle between the hands of the clock at this time **greater than** or **less than** 90°?

**8.** For the following times, state if the small angle between the hands of a clock would be:

**A** Greater than 90°
**B** Less than 90°

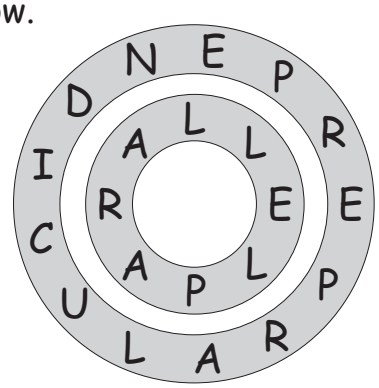
(a) 1:00 (b) 5:00 (c) 11:00

(d) 2:30 (e) 7:15 (f) 11:50

**9.** (a) Name one time when the hands of a clock are perpendicular.

(b) What is the angle between the hands at this time?

**10.** Two words from this worksheet are written in the diagram below. One word is in each ring. Find the words and write them below.



# SHAPES 2

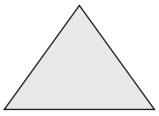
MARK

# 14

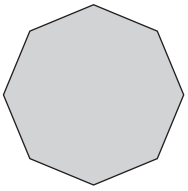
**1.** From the list below, choose the correct name for the shapes shown and write the name under each shape.

**square parallelogram circle rectangle hexagon pentagon octagon triangle trapezium**

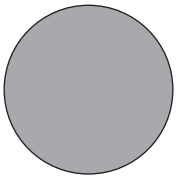
_____



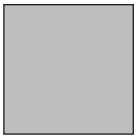
_____



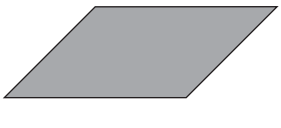
_____



_____

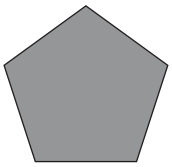


_____

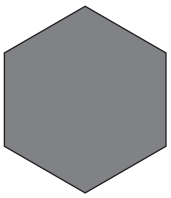


_____

_____

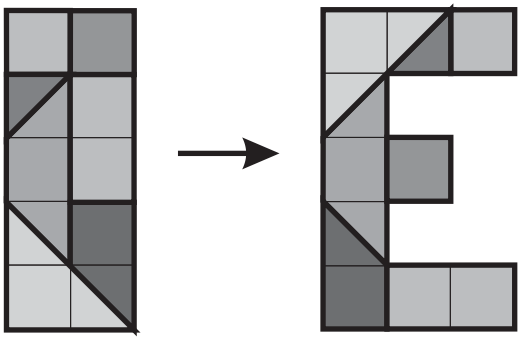


_____



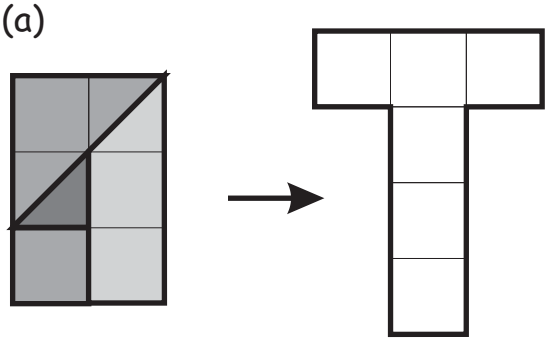
_____

**2.** The letter E can be made by rearranging the shapes cut out from the rectangle shown below.

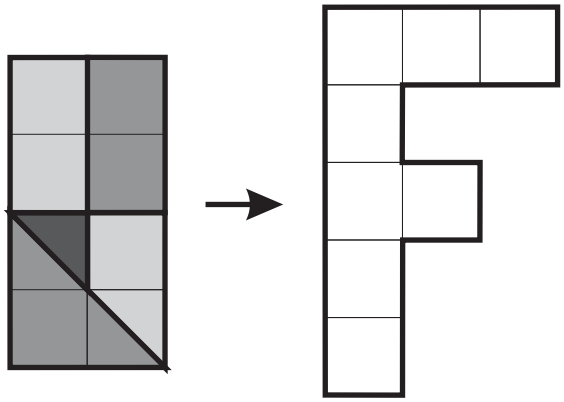


Using the shapes below show how they can be rearranged to form the letters shown.
You may find it easier to cut the shapes out of paper.

(a)

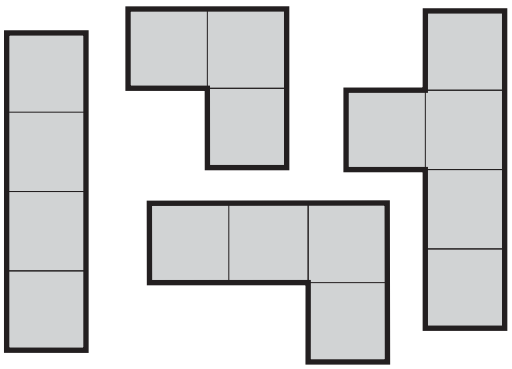


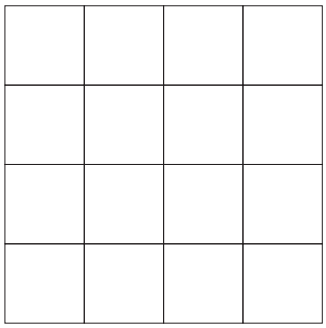
(b)



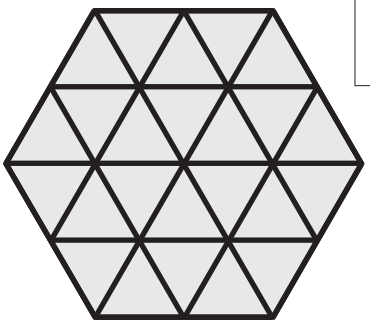
**3.** On the grid below show how these four objects can be arranged to form a **square**. They may need to be turned.



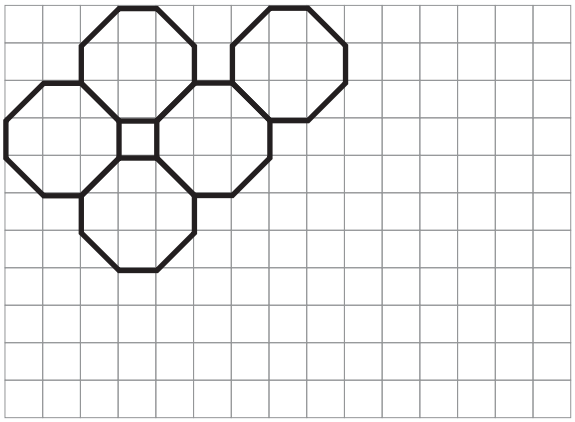


**4.** How many rectangles are in the shape below?
(The answer is not 6!)

**5.** How many regular hexagons are in this shape?

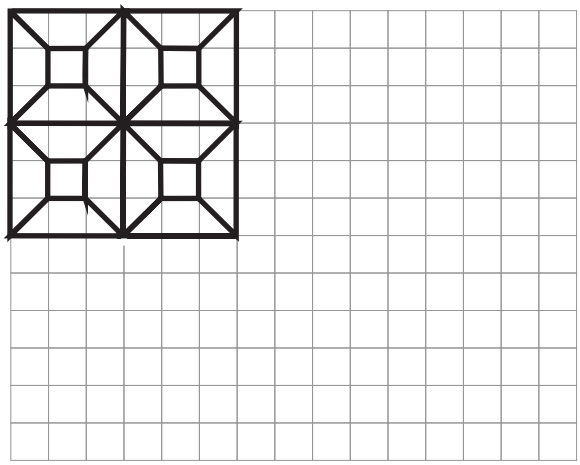


**6.** Complete the patterns shown below.
Colour them in.
Write under each pattern the shapes that make up the pattern.



Shapes: _____

_____



Shapes: _____

_____

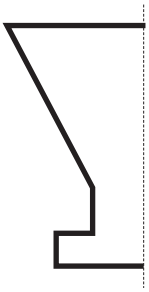
# SHAPES 3

MARK

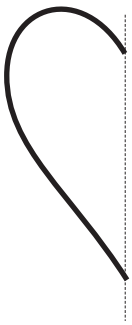
15

**1.** Complete the symmetrical shapes below by drawing the other half of each shape.
The lines of symmetry are shown.

(a)

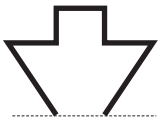


(b)



(c)

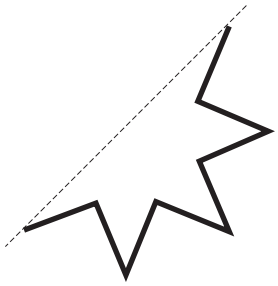
(d)



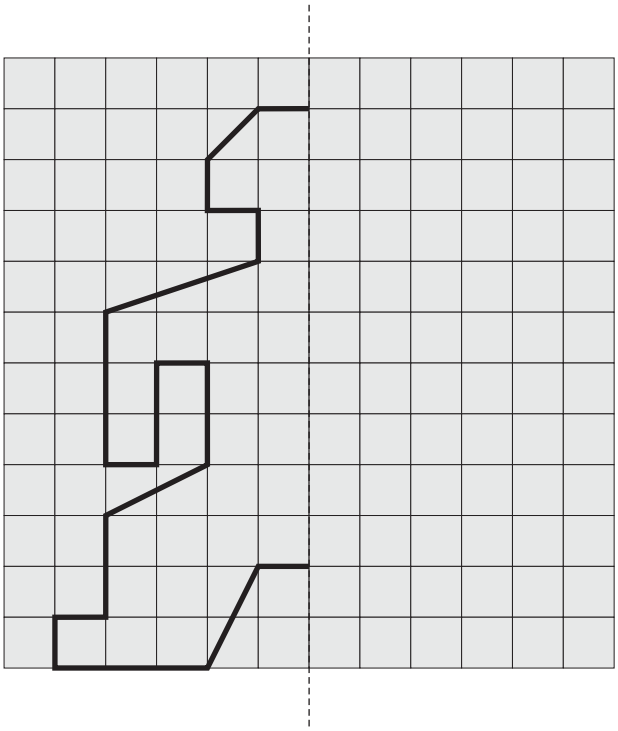
(e)

(f)

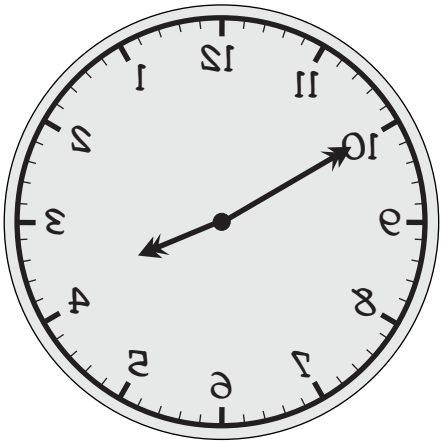
(g)



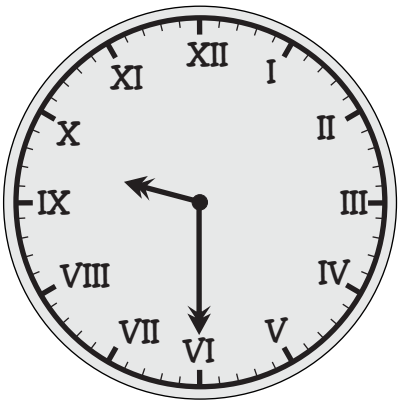
**2.** Complete the symmetrical shape below by drawing the other half.
Colour in the shape.



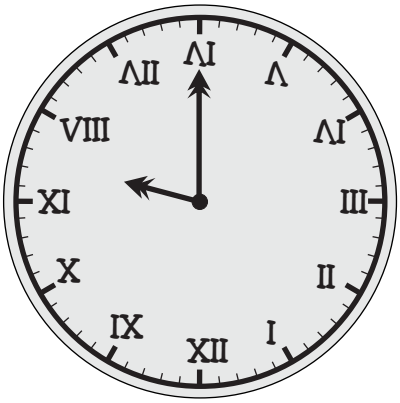
**3.** Matilda could see the reflection of a clock in a mirror as shown below.
What time is it?



**4.** A clock is shown below.




Adelaide tried to draw an upside-down reflection of this clock but made five mistakes.
Her drawing is below.
Circle the five mistakes she made.




**5.** Bobbie, Codie and Xeh noticed that their names were the same when reflected.

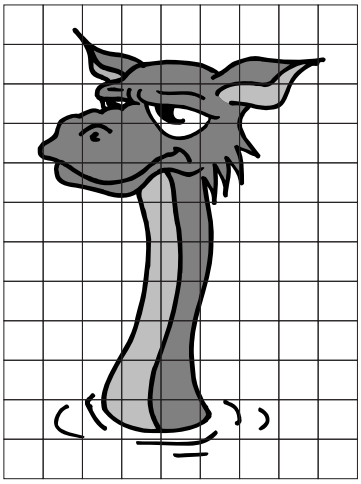
BOBBIE CODIE XEH
BOBBIE CODIE XEH

Can you think of two other words that look the same when reflected.

_____

_____

**6.** Draw an enlarged version of this creature on the grid below.



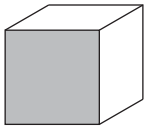
# 3 DIMENSIONS 1

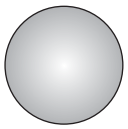
MARK

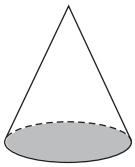
16

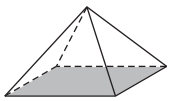
**1.** From the list below choose the correct name for each of the objects. Write the correct name under each object.

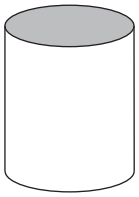
| | |
|---|---|
| SQUARE-BASED PYRAMID | |
| SPHERE | CONE |
| RECTANGULAR PRISM | |
| CYLINDER | CUBE |
| TRIANGULAR PRISM | |

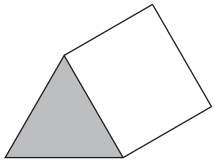


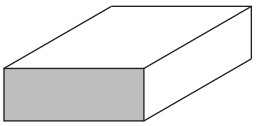








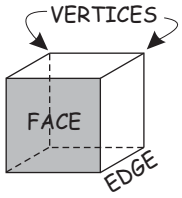




**2.** Without using a ruler, sketch a cube, cylinder, cone and square-based pyramid below.

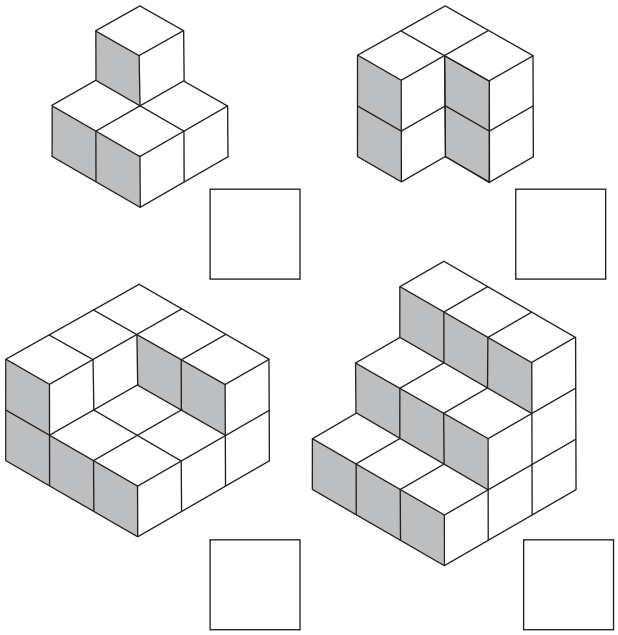
| | |
|---|---|
| CUBE | CYLINDER |
| CONE | SQUARE-BASED PYRAMID |

**3.** A cube has 6 faces, 8 vertices and 12 edges.
State the number of faces, vertices and edges in the following objects.

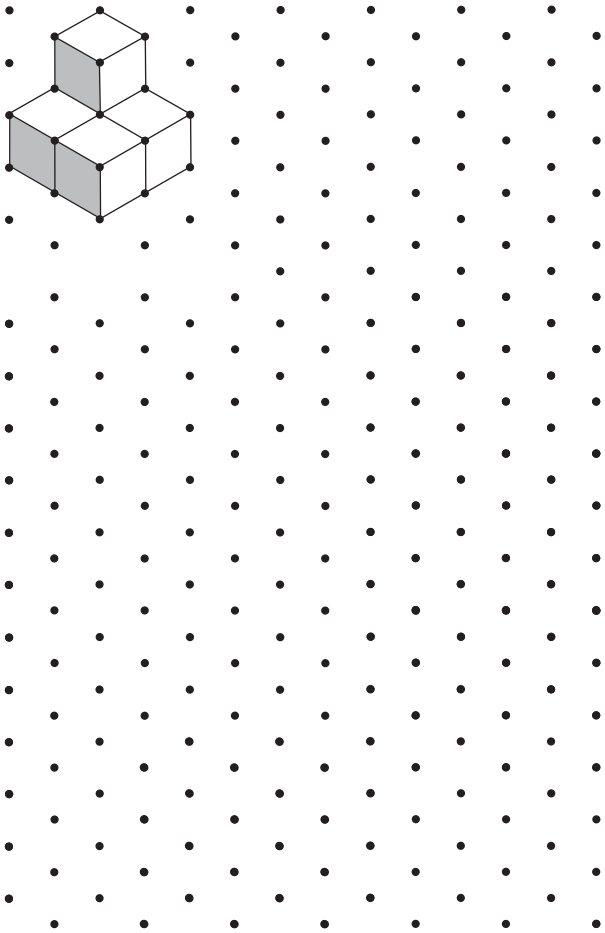



| Object | Number of faces | Number of vertices | Number of edges |
|---|---|---|---|
| Square-based Pyramid | | | |
| Triangular Prism | | | |

**4.** How many of the small blocks would be needed to make the following objects?

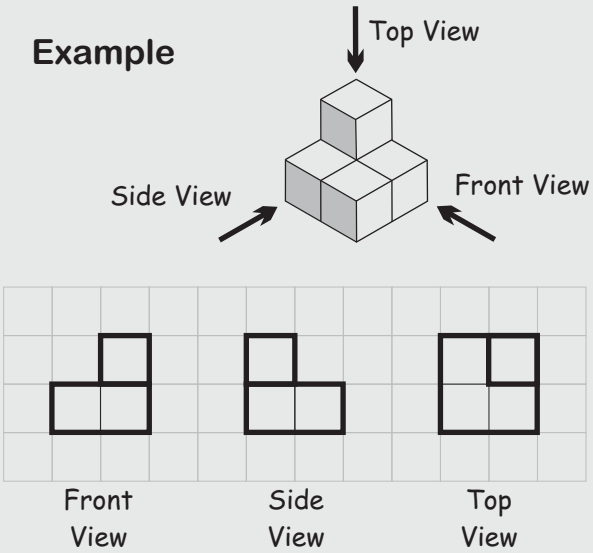


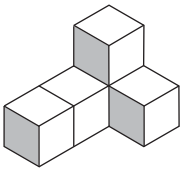
**5.** Draw the objects above on the dots below. One is drawn as an example.

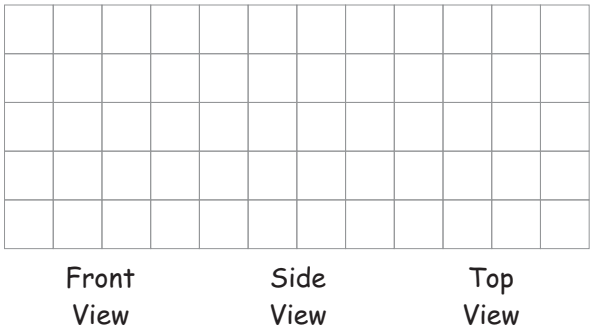


**6.** Draw the front, side and top views of the object below.

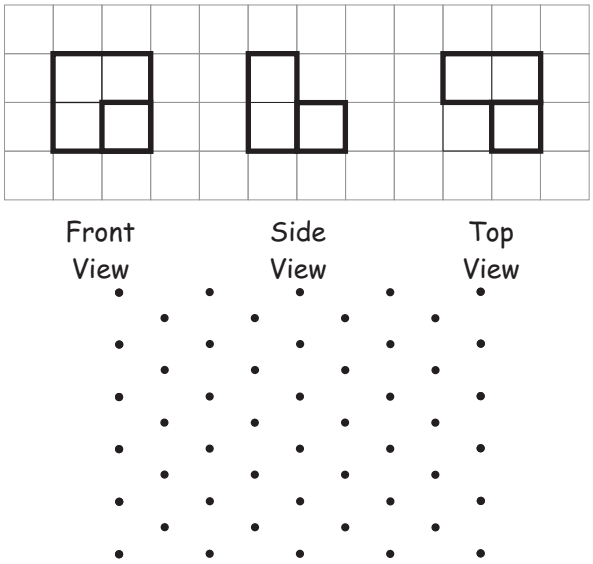
**Example**






**7.** The front, side and top views of an object are shown below.
Draw this object on the dots shown.



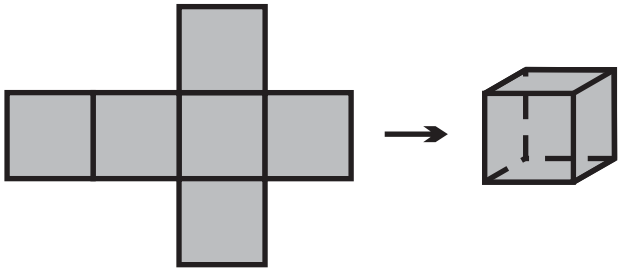

 

# 3 DIMENSIONS 2

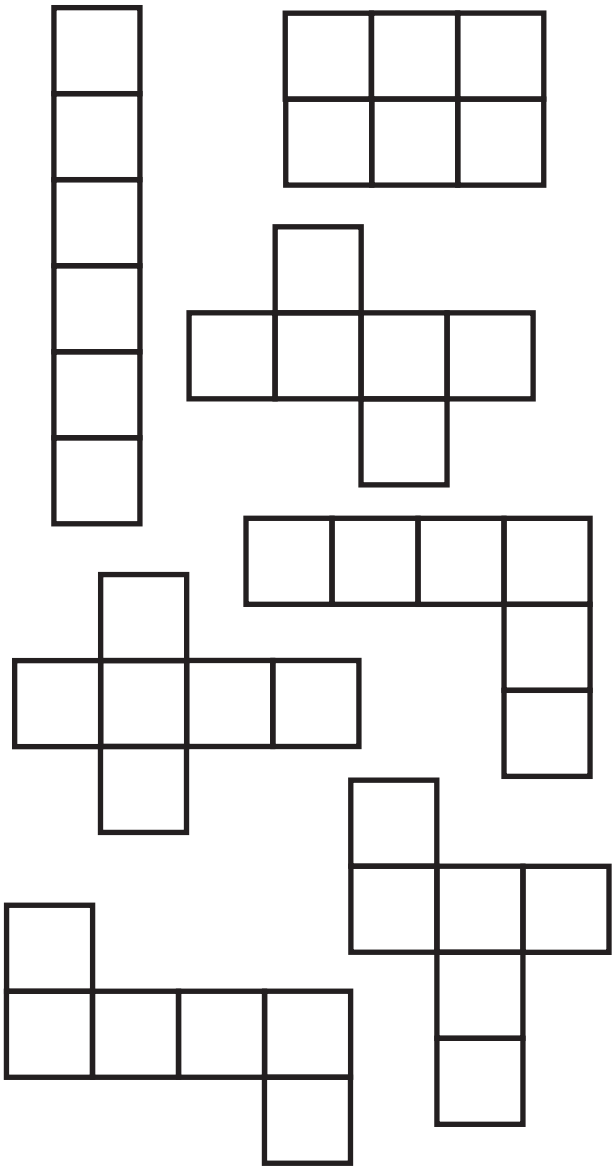
MARK

# 17

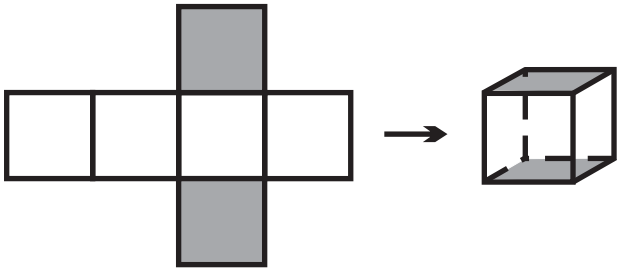
**1.** The following net could be folded to form a cube.



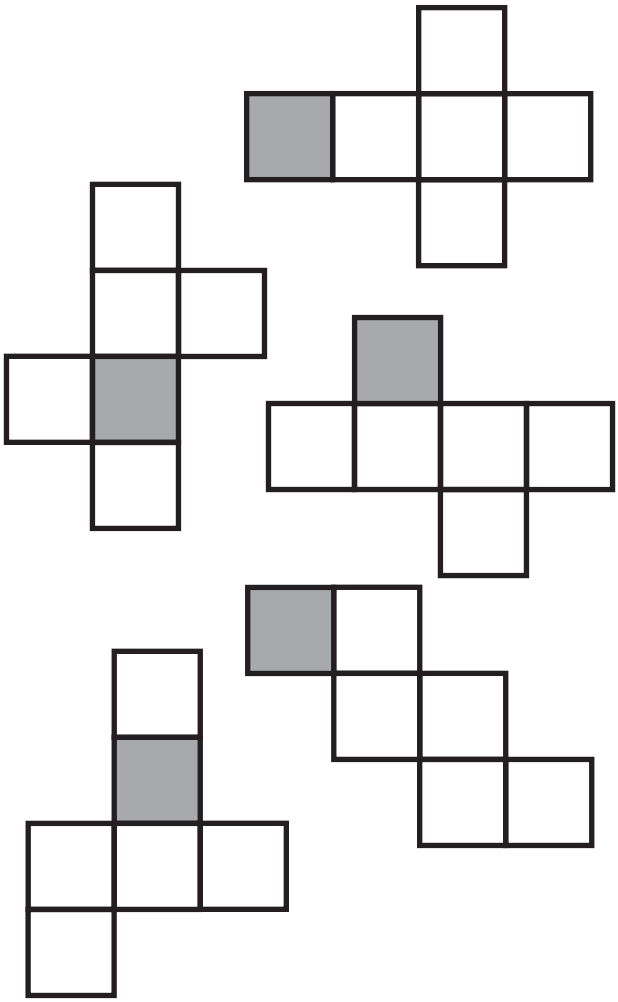
Colour in the nets below that could also be folded to form a cube.



**2.** The net below has two sections shaded that would be opposite each other in the cube.

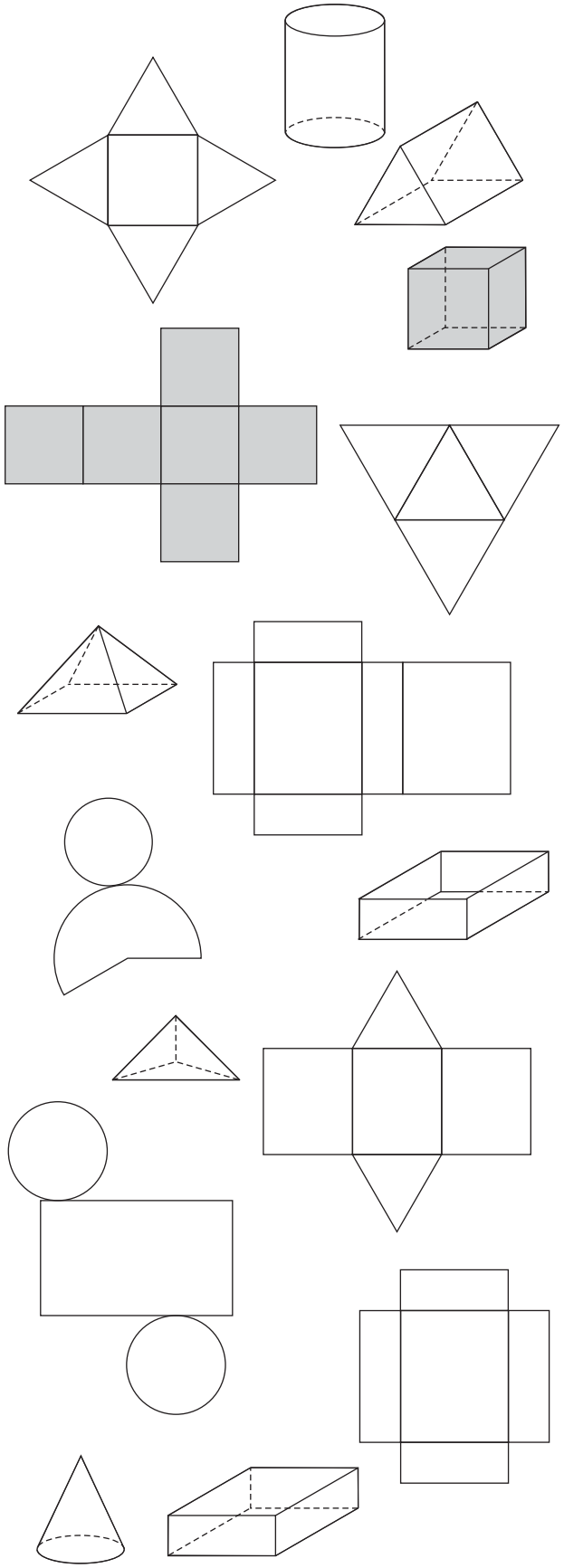


One section is shaded in each of the nets below. Colour in the section that would be opposite the shaded face in the cube.

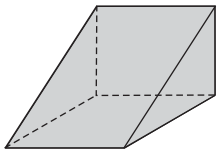


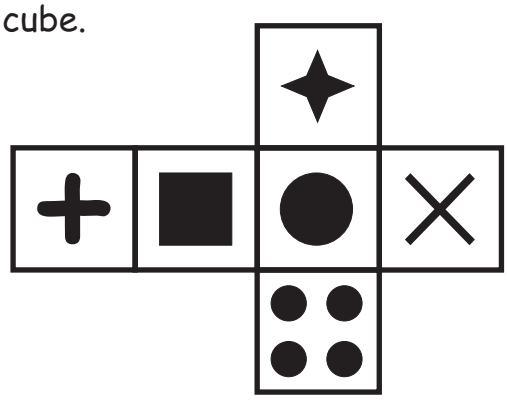
**3.** Match each net below with the object it would form. Colour each pair a different colour.
The cube is shaded as an example.



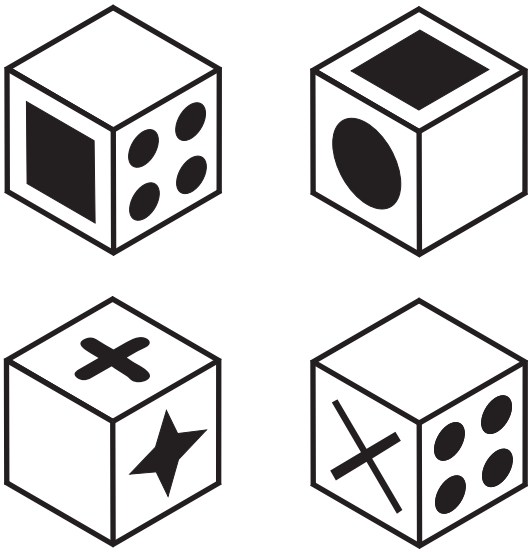
**4.** Draw a net for this object.



**5.** The net below is formed into a cube.



Four views of the cube are shown below with one of the faces not included.
Draw the correct symbol on each blank face.

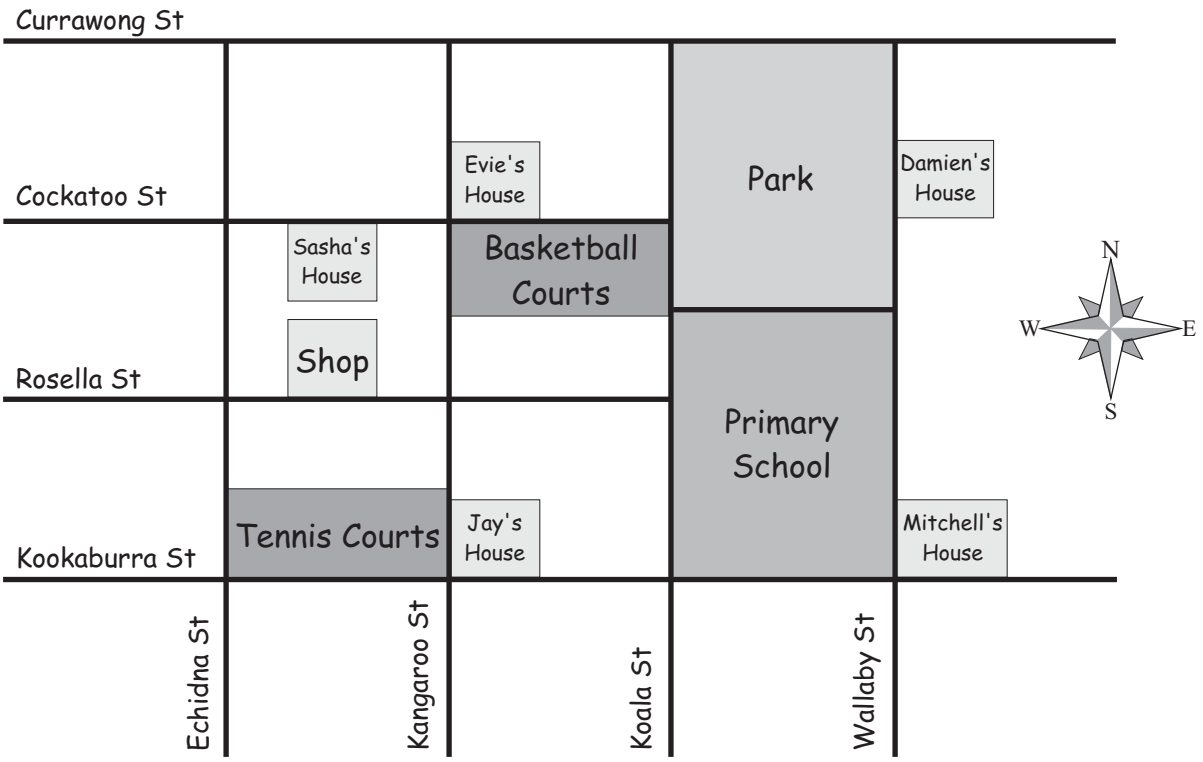


# MAPS 1

MARK

18

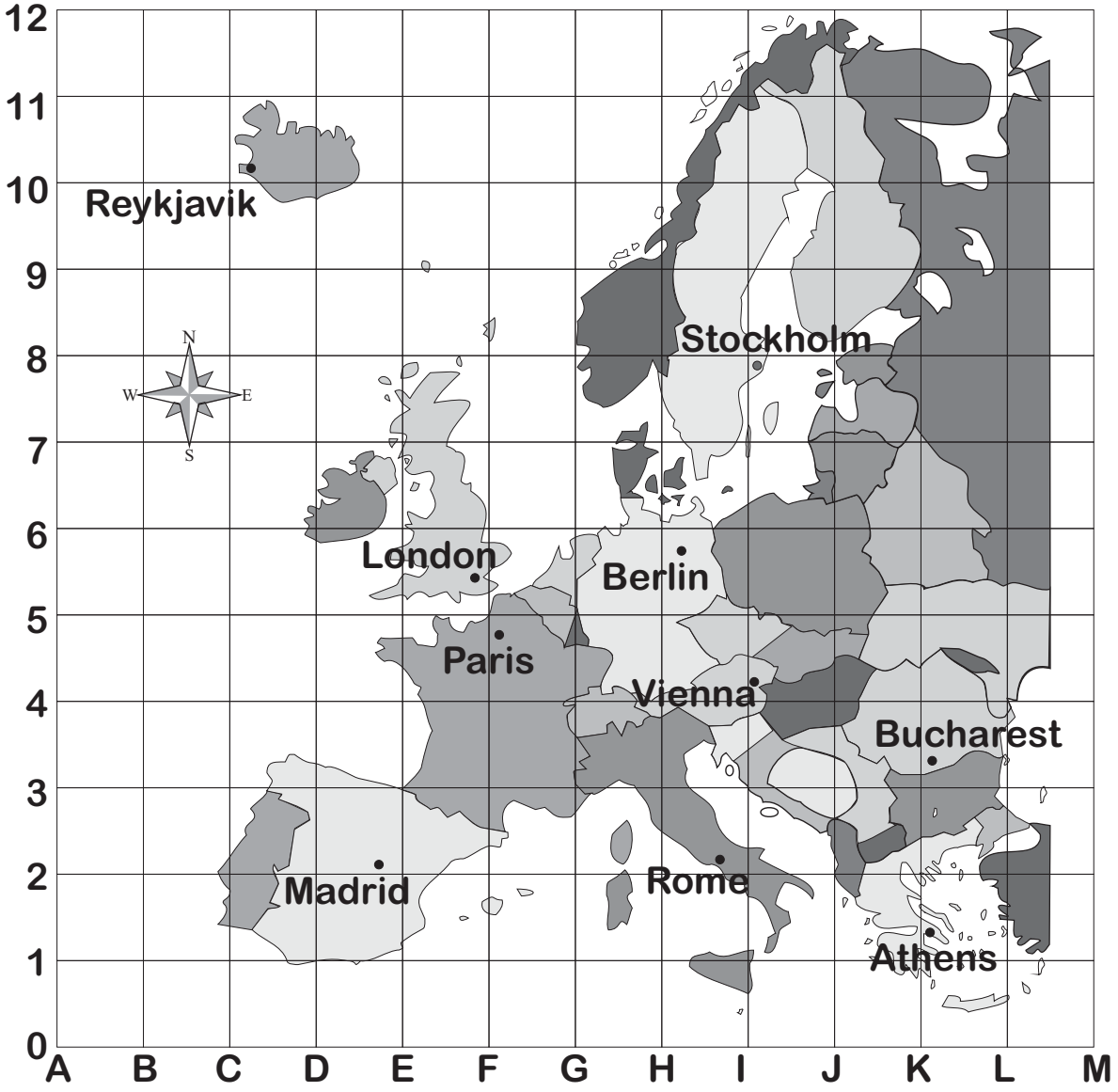



In the sentences below, fill in the gaps with one of the following words:

**north**, **south**, **east** or **west**

1. Jay's house is _____ of the tennis courts.
2. Evie's house is _____ of Jay's house.
3. Damien's house is _____ of the park.
4. The Primary School is _____ of the park.
5. Jay's house is _____ of Mitchell's house.
6. If Sasha left her house and turned right into Cockatoo St, what direction would she be facing? _____.
7. If Damien left his house and turned left into Wallaby St, what direction would he be facing? _____.
8. Salonika was walking north along Kangaroo St and turned right into Rosella St. What direction is she now walking? _____.
9. Humphrey lived at the corner of Currawong and Echidna streets. He left his house and walked along Echidna St. He then turned right into Kookaburra St. He is now facing _____.




A map of Europe with several of the capital cities is shown here.
In questions 10-16, fill in the gaps with either **north**, **south**, **east** or **west**.

**10.** Rome is _____ of Madrid.

**11.** Stockholm is _____ of Vienna.

**12.** London is _____ of Berlin.

**13.** Athens is _____ of Bucharest.

**14.** Write down the city that is closest to each of the following coordinates.

(a) K3 _____ (b) C10 _____.

(c) H6 _____ (d) I8 _____.

**15.** Write down the coordinate that is closest to each of the following cities.

(a) Madrid _____ (b) Rome _____ (c) Paris _____.

(d) Vienna _____ (e) London _____ (f) Athens _____.

**16.** Find which country each of the following cities is the capital of?

(a) London _____ (b) Paris _____ .

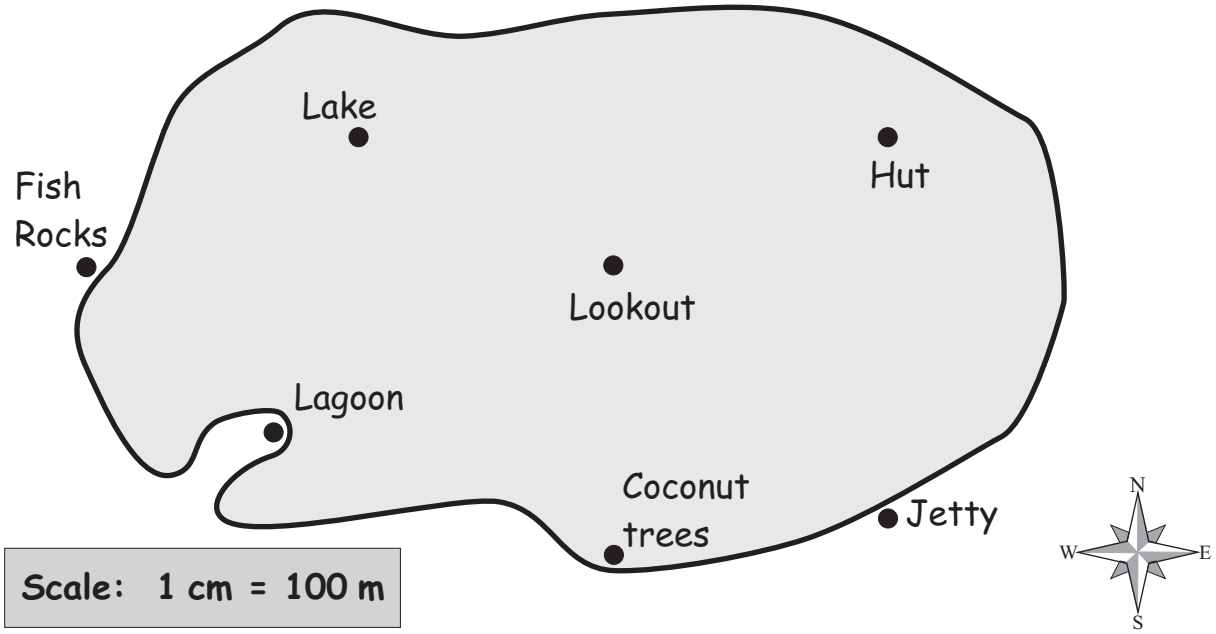
(c) Athens _____ (d) Vienna _____ .

# MAPS 2

MARK

19

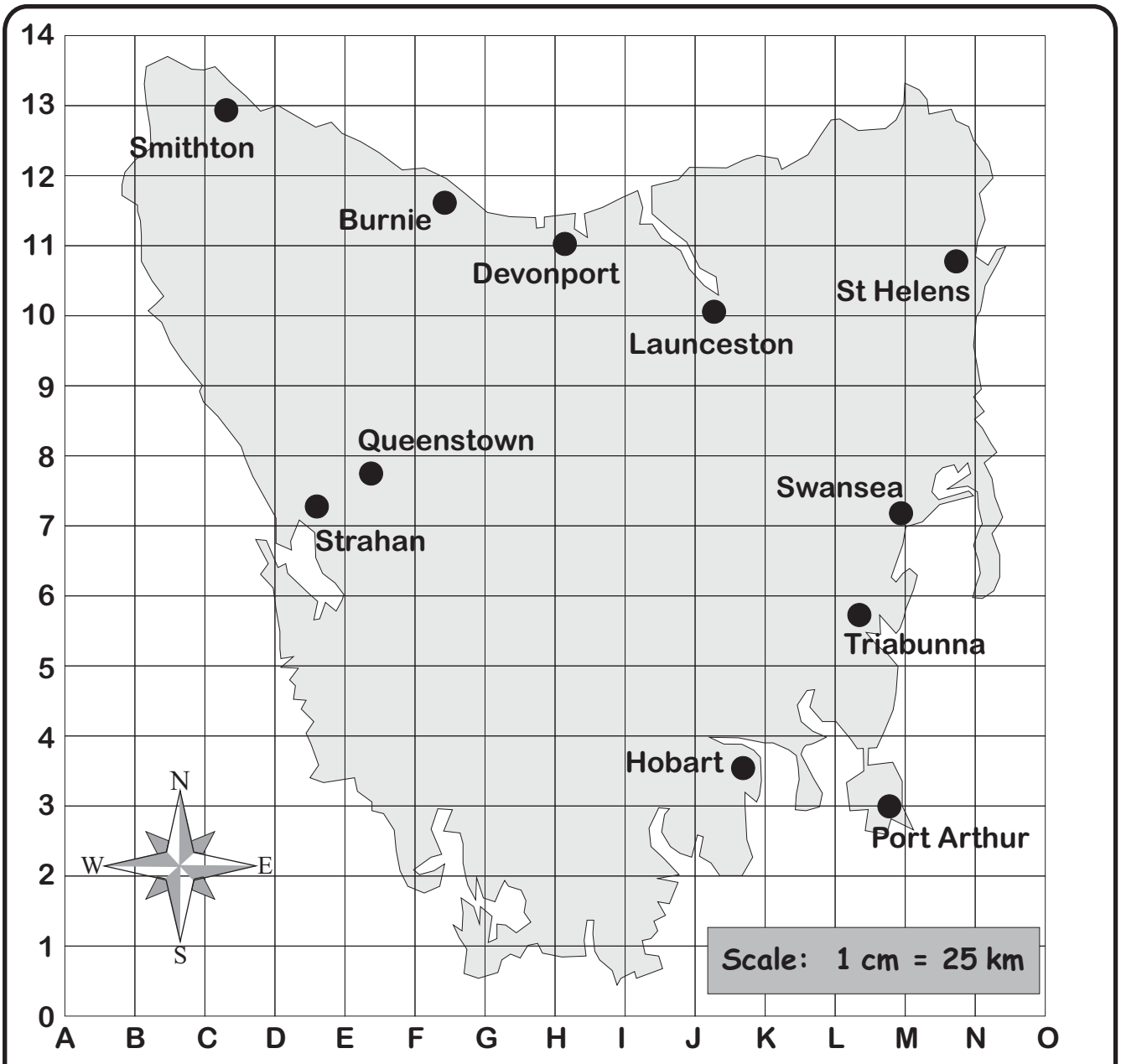



The map shown above is an island that Lee and Stefan stayed on for a holiday.
In questions 1-4, fill in the gaps with one of the following directions:

**north**, **south**, **east** or **west**

1. The hut is _____ of the jetty.
2. The lake is _____ of the hut.
3. The lookout is _____ of the fish rocks.
4. The coconut trees are _____ of the lookout.
5. Use a ruler and the scale shown on the map to find the distance between the following locations.
   (a) The hut and the lake _____.
   (b) The lookout and the jetty _____.
   (c) The fish rocks and the coconut trees _____.
   (d) The lake and the lagoon _____.
6. One day Lee and Stefan left the hut and visited the following locations walking in straight lines between them. They first went to the lake to get some water. Then they went to the fish rocks, then to the lookout, then back to the hut.
   What is the total distance they walked? _____.
7. On another day Lee and Stefan left the hut and walked 300 m west then 400 m south and had lunch. Mark with an **X** on the map where they had lunch. How far are they (in a straight line) from the hut? _____.




The map above is Tasmania. Several of the towns and cities are shown.

**8.** What city/town is located nearest to each of the following grid coordinates?

(a) L6 _____ (b) N11 _____

(c) J10 _____ (d) C13 _____

**9.** Write down the coordinate that is closest to each of the following towns.

(a) Devonport _____ (b) Port Arthur _____

**10.** Use a ruler and the scale shown on the map to find the distance between the following cities/towns.

(a) Strahan and Queenstown _____

(b) Burnie and Devonport _____

(c) Swansea and St Helens _____

(d) Burnie and Hobart

**11.** Rosebery is a town that is 50 km north of Queenstown. Mark Rosebery on the map.

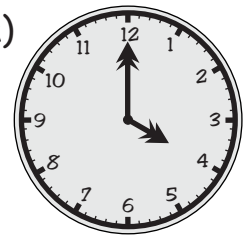
# TIME

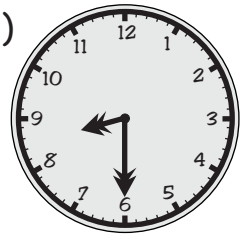
MARK

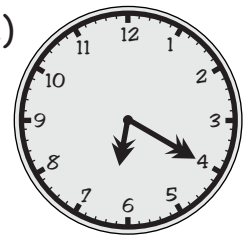
# 20

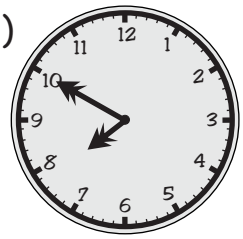
**1.** Use **words** to write the time shown on each clock below.

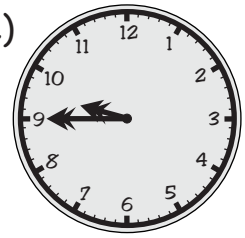
**Examples**
Seven o'clock
Half past two
Ten past five
Quarter to nine

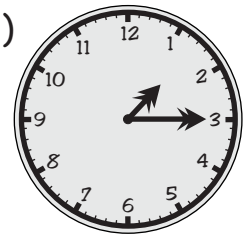
(a) 

(b) 

(c) 

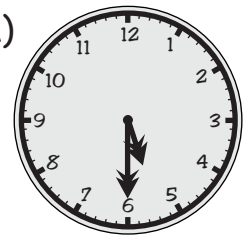
(d) 

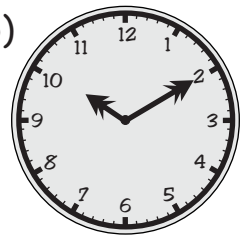
(e) 

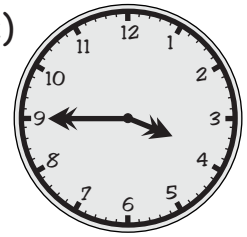
(f) 

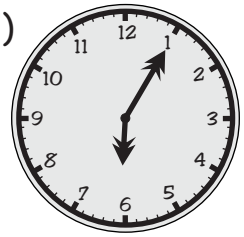
**2.** Write the times below in **digital** form.

**Examples**
3:45
11:20

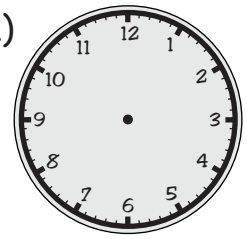
(a) 

(b) 

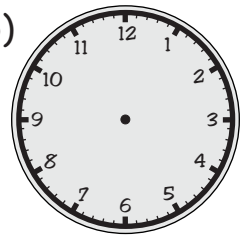
(c) 

(d) 

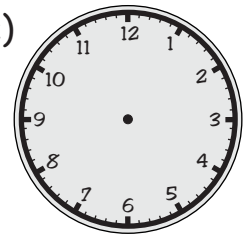
**3.** Draw the hands on the clocks below for the times shown.

(a) 

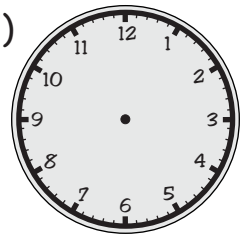
7:40

(b) 

2:25

(c) 

3:30

(d) 

1:55

**4.** Fill in the numbers in the following.

(a) 1 year = _____ months
(b) 1 week = _____ days
(c) 1 day = _____ hours
(d) 1 hour = _____ minutes
(e) 1 minute = _____ seconds
(f) April = _____ days
(g) December = _____ days

**5.** What are the following dates?

(a) Australia Day

_____

(b) Christmas Day

_____

(c) April Fool's Day

_____

**6.** (a) How many days are in June?

Marcus is 10 days younger than Ki.

(b) Is Marcus's birthday before or after Ki's birthday?

(c) Ki's birthday is the 25th of June. What is the date of Marcus's birthday?

**7.** What year were the Olympic Games held in Sydney?

**8.** Tayla is making a banana cake. The cake needs to be in the oven for 40 minutes. Tayla put it in the oven at 5:40.

At what time should she take it out of the oven?

**9.** A train timetable between Melbourne (Southern Cross) and Bacchus Marsh is shown below.

| Station | Time |
|---|---|
| Southern Cross | 8:30 |
| Footscray | 8:37 |
| Sunshine | 8:43 |
| Ardeer | 8:46 |
| Deer Park | 8:50 |
| Rockbank | 9:07 |
| Melton | 9:14 |
| Bacchus Marsh | 9:27 |

(a) What time does this train leave from the following stations?

(i) Southern Cross

(ii) Sunshine

(iii) Rockbank

(b) What time does the train arrive at Bacchus Marsh?

(c) How many minutes does it take the train to travel between the following stations?

(i) Spencer St and Footscray

(ii) Footscray and Sunshine

(iii) Ardeer and Rockbank

(iv) Southern Cross and Bacchus Marsh

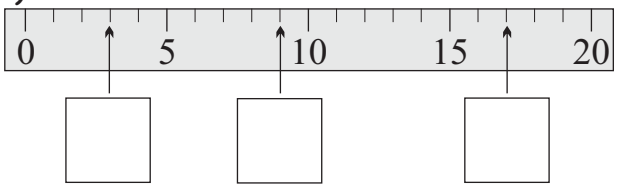
# LENGTH 1

MARK

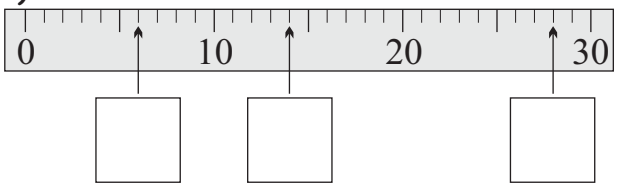
# 21

**1.** Read the measurements shown on these scales.

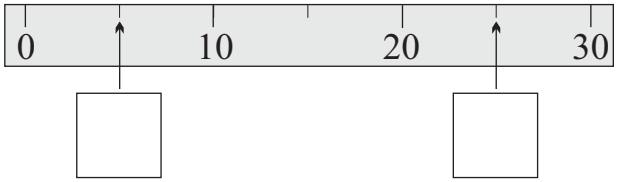
(a)



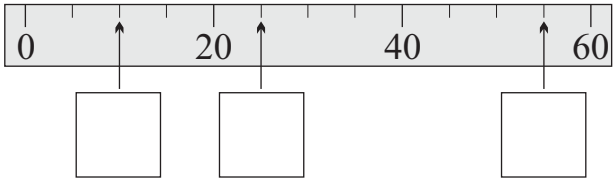

(b)



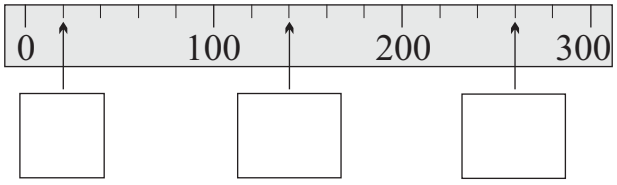

(c)



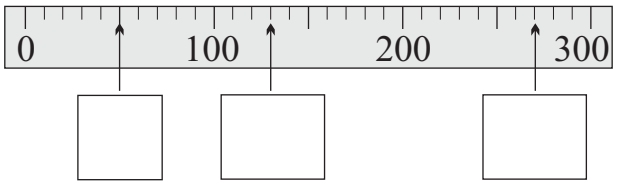

(d)



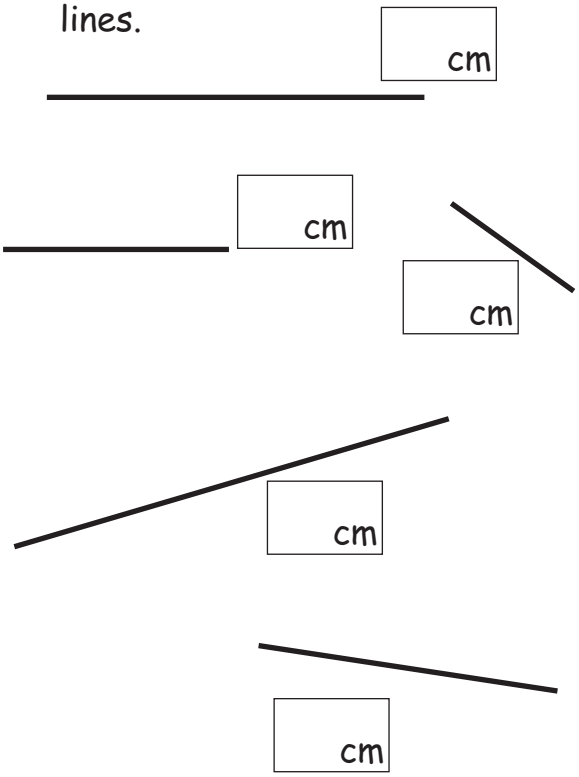

(e)



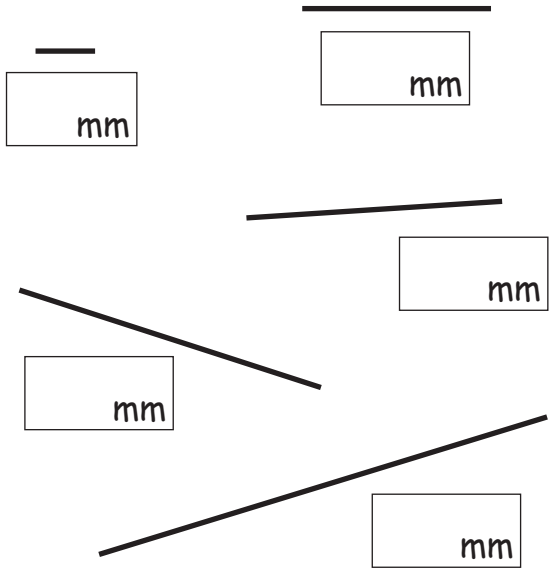

(f)




**2.** Use a ruler to measure the length (in **centimetres**) of the following lines.

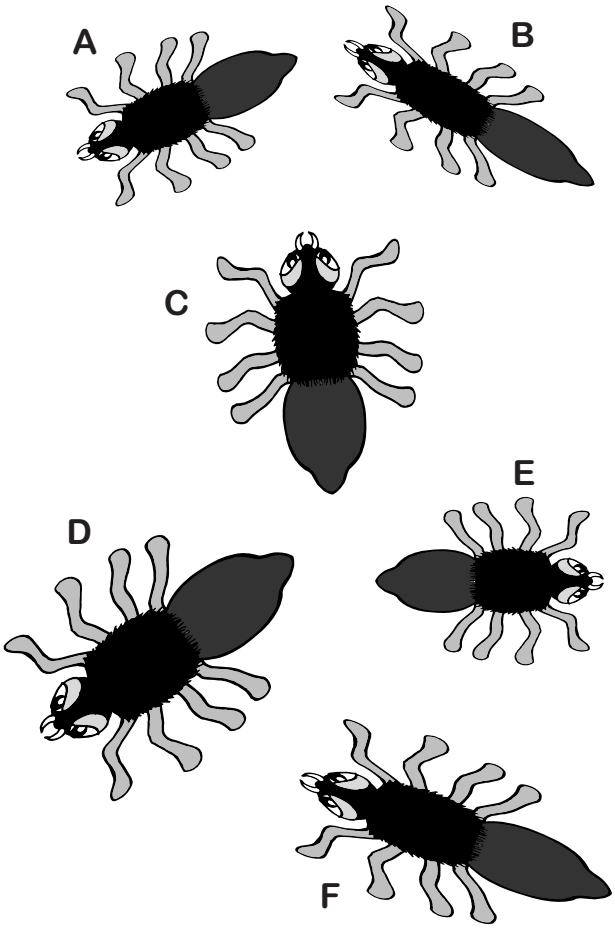



**3.** Use a ruler to measure the length (in **millimetres**) of the following lines.



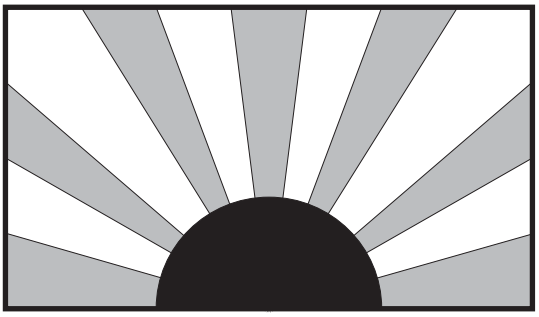

 

**4.** Guess which of the spiders below is the longest.

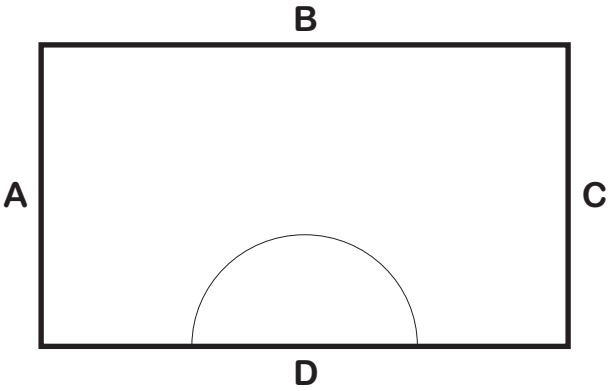



Measure the length (in millimetres) of each spider and write them in the table below.

| Spider | Length (mm) |
|---|---|
| A | |
| B | |
| C | |
| D | |
| E | |
| F | |



**5.** The diagram above can be drawn below by following these steps.
(a) Mark points one centimetre apart on sides **A**, **B** and **C** of the diagram below.
(b) Mark a point half way along side **D**.
(c) Draw lines from all the points on sides **A**, **B** and **C** to the half way point on side **D**.
(d) Choose your own colours to colour in the diagram.




**6.** Rearrange the letters from the following phrases to form units of length.
(a) time miller

_____

(b) cement tier

_____

# LENGTH 2

MARK

# 22

**1.** Choose the unit that would best be used to measure the objects below.

| | |
|---|---|
| **A** - millimetres | **B** - centimetres |
| **C** - metres | **D** - kilometres |

(a) The width of a television screen.

(b) The length of a football field.

(c) The distance from Australia to New Zealand.

(d) The length of an ant.

(e) The length of an aeroplane.

(f) The length of a banana.

(g) The distance around Tasmania.

(h) The thickness of a piece of string.

**2.** Complete the following sentences by writing in the spaces the most appropriate unit of length.

| | |
|---|---|
| **millimetres** | **centimetres** |
| **metres** | **kilometres** |

(a) Nicholas had to walk 300 _____ to school.

(b) Beryl had a scarf that was 120 _____ long.

(c) Nicola found a caterpillar that was 20 _____ long.

(d) Kim and Stephanie rode their bikes 8 _____ to visit their grandmother.

(e) Russell went fishing and caught a trout that was 35 _____ long.

(f) Rose read a book that was 10 _____ thick.

(g) The longest snake ever caught was 10 _____ long.

(h) Amelia wanted to train for little athletics so she ran 2 _____ every night.

**3.** Choose the correct length from the list below to fill in the gaps in the following sentences.

380 000 km  70 m  170 mm
250 km  9 km
70 cm
25 m  3 mm

(a) The distance around Uluru is _____.

(b) The length of a jumbo jet is _____.

(c) The thickness of a window is _____.

(d) The distance from Victoria to Tasmania is _____.

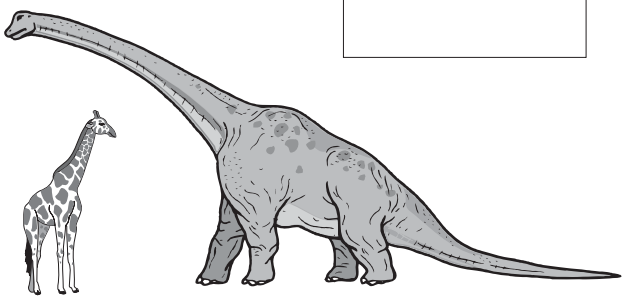
(e) The length of a netball court is _____.

(f) Length of a baseball bat is _____.

(g) The length of a banana is _____.

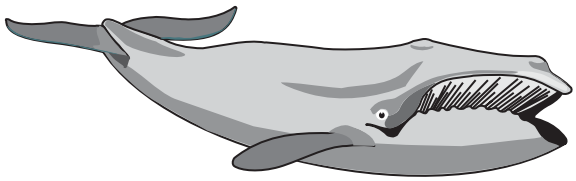
(h) The distance from Earth to the Moon is _____.

**4.** A giraffe grows to about 6 m tall. The brachiasaurus was the tallest of the dinosaurs.
The diagram below shows a giraffe and a brachiasaurus.
From this diagram what is the approximate height of the brachiasaurus. ☐



**5.** The longest whale was about 30 m. This is about the same length as which one of the following objects. Tick the correct box.

| | |
|---|---|
| Surfboard | ☐ |
| Tennis court | ☐ |
| Football field | ☐ |



**6.** The largest spider caught was 280 mm across.
This is about the same as which of the following objects.
Tick the correct box.

| | |
|---|---|
| The length of your thumb | ☐ |
| The length of a pencil | ☐ |
| The length of a computer keyboard | ☐ |

# LENGTH 3

MARK

# 23

**1.** Write in **full** the names of the following units.

1 m = 1 _____

1 cm = 1 _____

1 mm = 1 _____

1 km = 1 _____

**2.** Fill in the gaps for the following conversions.

(a) 1 m = _____ cm

(b) 1 cm = _____ mm

(c) 1 m = _____ mm

(d) 1 km = _____ m

(e) 2 m = _____ cm

(f) 3 cm = _____ mm

(g) 6 km = _____ m

(h) $\frac{1}{2}$ km = _____ m

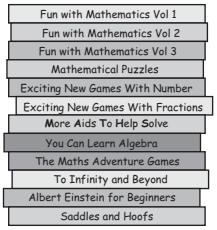
(i) $\frac{1}{2}$ cm = _____ mm

(j) 40 mm = _____ cm

**3.** Xenia had a pony tail that was 1 m long.
One day she cut her pony tail in half.
How long (in cm) was her short pony tail?

cm

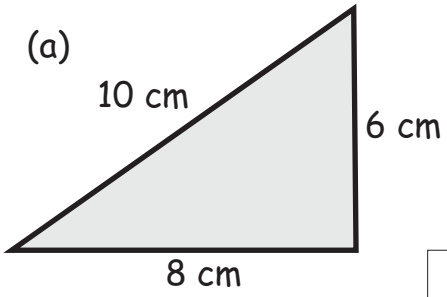
**4.** Rachel had 12 CDs in their cases stacked on her desk.
The CD cases were each 5 mm thick.
How high (in **cm**) is the stack of CDs?




cm

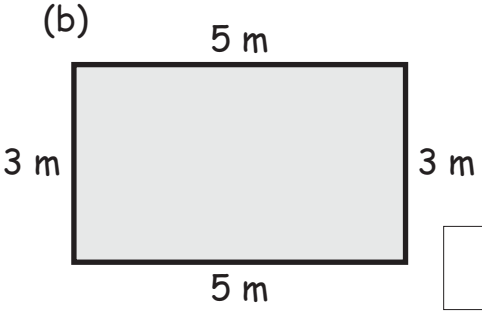
**5.** Find the perimeter of each of the following shapes.

(a)



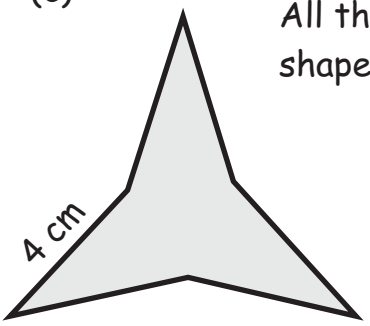

cm

(b)




m

(c)




All the sides in this shape are 4 cm long.

cm

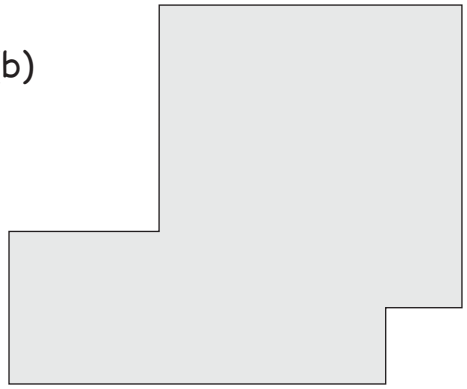
 

**6.** Use a ruler to measure the length of each side in the following shapes.
Find the perimeter of each shape.

(a)

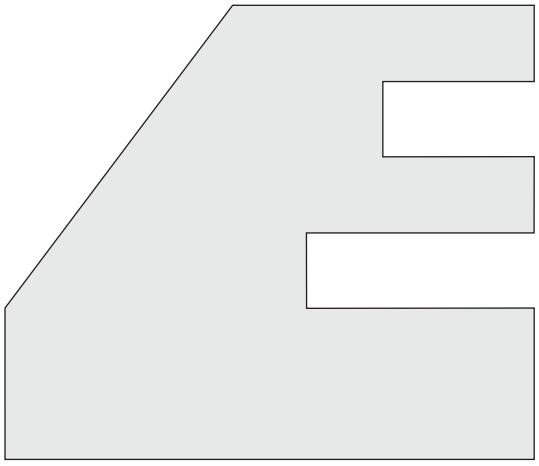
Perimeter = cm

(b)



Perimeter = cm

(c)



Perimeter = cm

**7.** Find the following words in the jumble word below.
Write the words in the spaces provided.

Shape _____

Metre _____

Perimeter _____

Measurement _____

Distance _____

Length _____

Height _____

Dimension _____

Unit _____

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| T | O | P | L | E | N | G | T | H | P | U |
| P | H | R | T | E | M | I | T | N | N | C |
| E | E | E | C | N | A | T | S | I | D | K |
| M | I | R | T | D | G | E | T | S | I | A |
| E | G | I | I | D | B | E | N | A | M | T |
| O | H | O | C | M | M | E | R | T | E | M |
| U | T | M | E | I | E | I | L | L | N | I |
| S | K | I | P | O | M | T | T | R | S | D |
| L | B | L | A | C | K | S | E | Y | I | E |
| E | I | D | H | T | H | G | I | R | O | C |
| M | E | A | S | U | R | E | M | E | N | T |

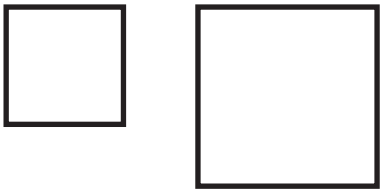
# AREA 1

MARK

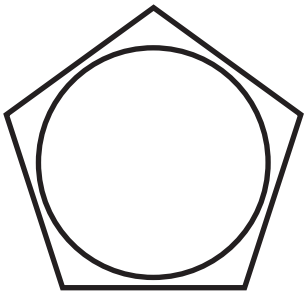
24

1. Out of the pairs of shapes below, colour in the shape that has the **largest** area.

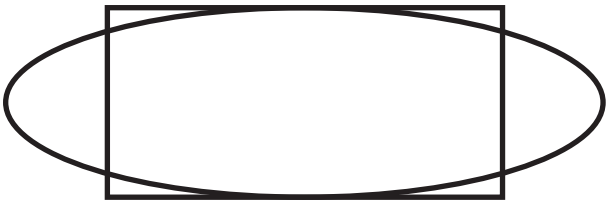
(a)



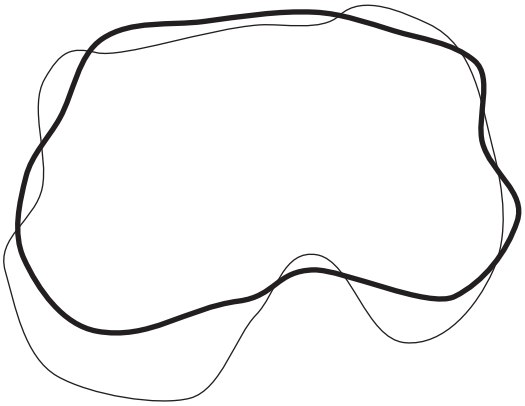
(b)



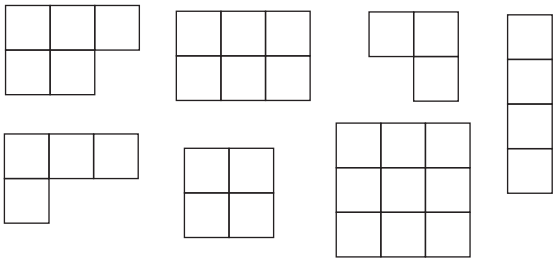
(c)



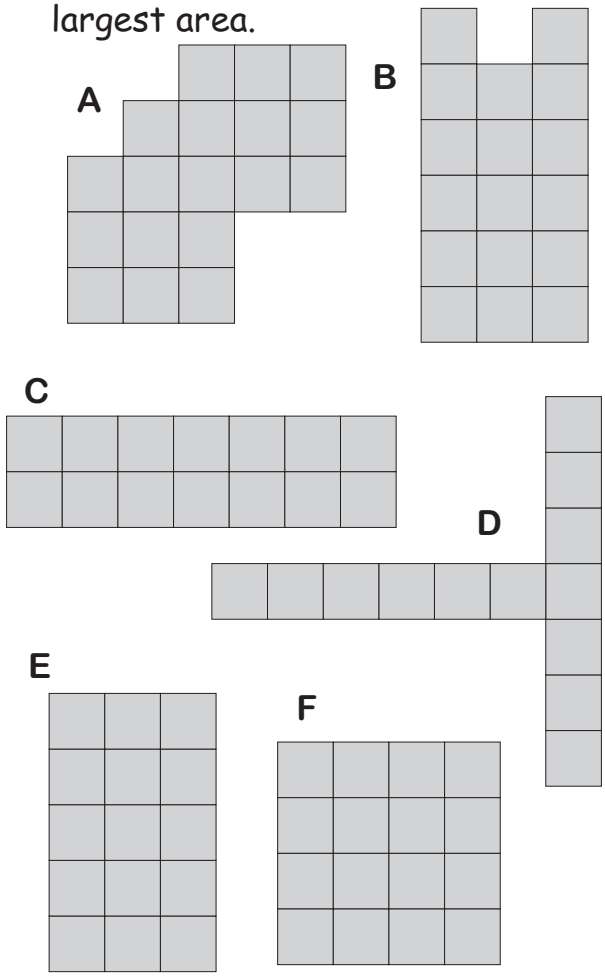
(d)



2. Colour in the **three** shapes below that have the same area.



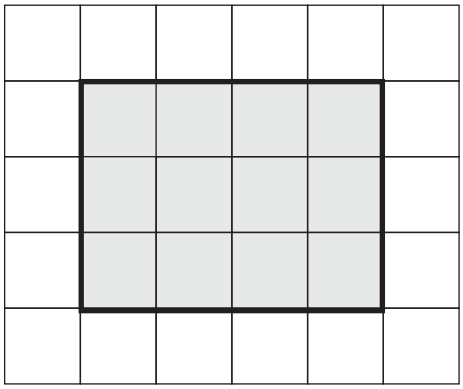
3. List the following shaded shapes in order from the one with the smallest area to the one with the largest area.



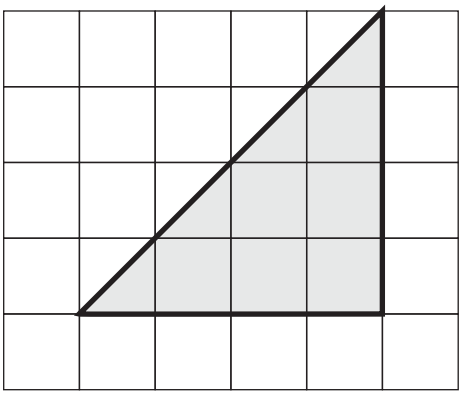
**4.** Each square in the following grids has an area of 1 $cm^2$.
Find the area of each shaded shape.

(a)



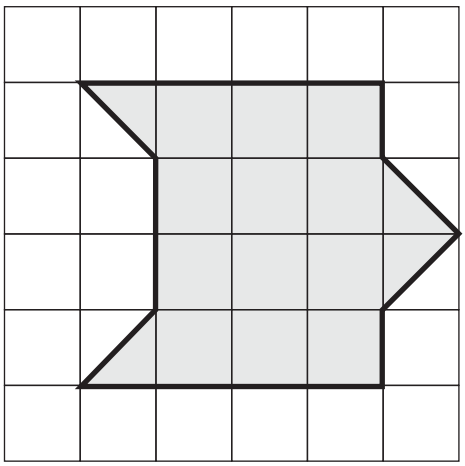
$cm^2$

(b)



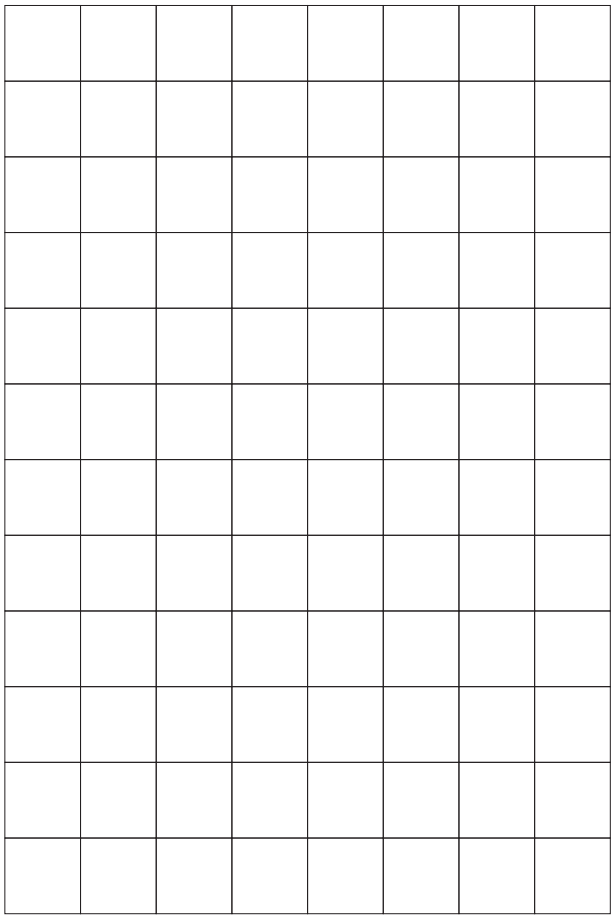
$cm^2$

(c)

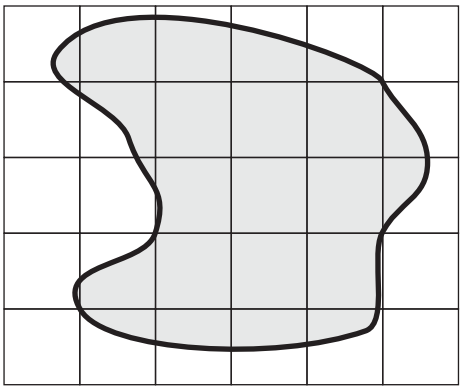


$cm^2$

**5.** Each square in the following grid has an area of 1 $cm^2$.
On this grid draw four **different** shapes that each have an area of 10 $cm^2$.



**6.** Each square in the following grid has an area of 1 $cm^2$.
Find the approximate area of the shaded shape.



$cm^2$

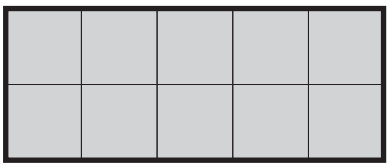
# AREA 2

MARK

25

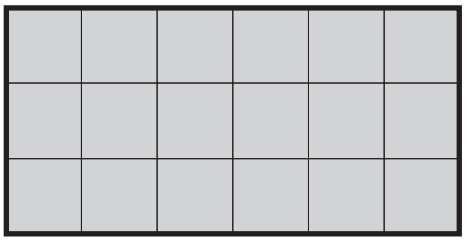
**1.** Each small square in the following rectangles has an area of 1 $cm^2$. Find the total area of each rectangle.

(a)



$cm^2$

(b)



$cm^2$

**2.** Find the area of each of the following rectangles.

(a)

2 cm

4 cm

$cm^2$

(b)

3 cm

5 cm

$cm^2$

**3.** Use a ruler to measure the side lengths of the following rectangles and find their areas.

(a)

$cm^2$

(b)

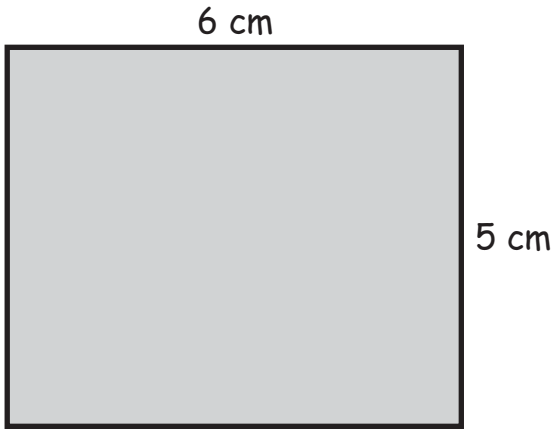
$cm^2$

**4.** Complete the table below by finding the area of each of the rectangles listed.
The length and width of each rectangle are shown in centimetres.

| Length (cm) | Width (cm) | Area ($cm^2$) |
|---|---|---|
| 10 | 2 | |
| 8 | 5 | |
| 7 | 6 | |
| 11 | 8 | |
| 20 | 10 | |

**5.** Find the **perimeter** and **area** of the rectangle below.




Perimeter = cm

Area = $cm^2$

**6.** Complete the table below by finding the perimeter and area of of each of the rectangles listed.

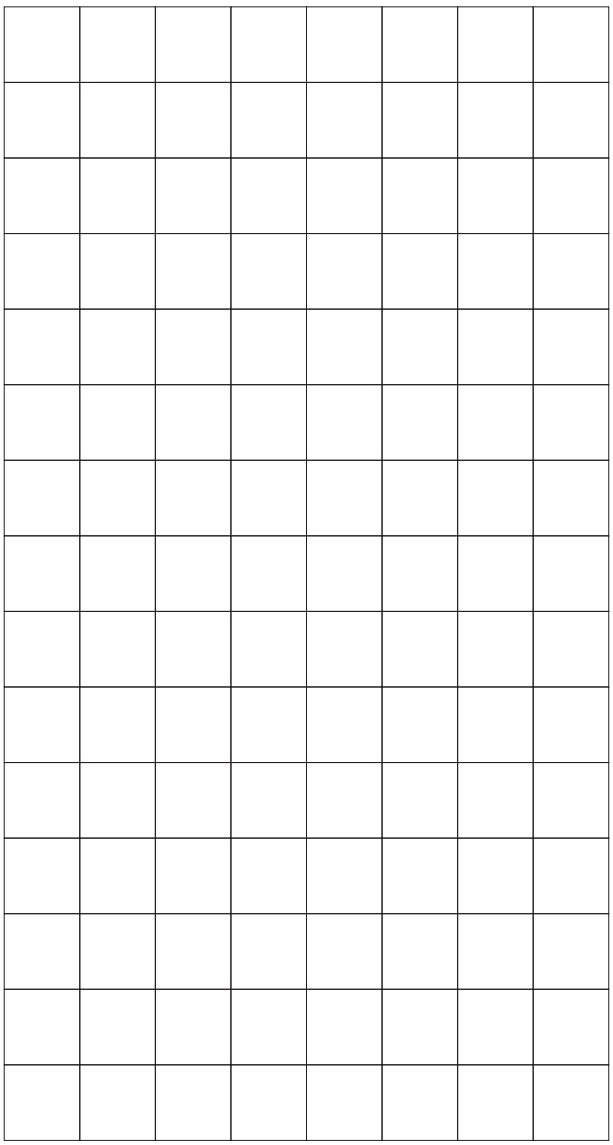
| Length (cm) | Width (cm) | Perimeter (cm) | Area ($cm^2$) |
|---|---|---|---|
| 3 | 2 | | |
| 6 | 5 | | |
| 10 | 4 | | |
| 8 | 8 | | |
| 20 | 5 | | |

**7.** Find the length and width of a rectangle that has an perimeter of 24 cm and an area of 20 $cm^2$.

Length = cm

Width = cm

**8.** The grid below consists of 1 $cm^2$ squares. On the grid draw and colour in the following rectangles:
(a) Colour in **red** a rectangle that has a perimeter of 14 cm and an area of 12 $cm^2$.
(b) Colour in **blue** a rectangle that has a perimeter of 14 cm and an area of 6 $cm^2$.
(c) Colour in **green** a rectangle that has a perimeter of 16 cm and an area of 12 $cm^2$.
(d) Colour in **yellow** a rectangle that has a perimeter of 16 cm and an area of 7 $cm^2$.



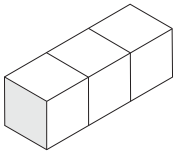
# VOLUME

MARK

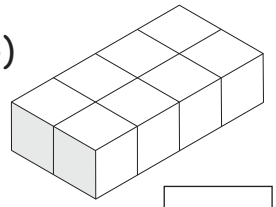
# 26

**1.** How many small cubes are in each of the following objects?

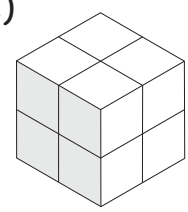
(a)



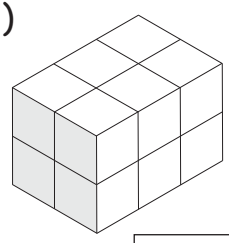
(b)



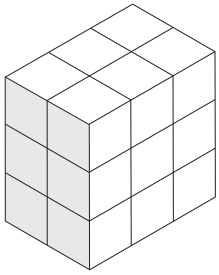
(c)



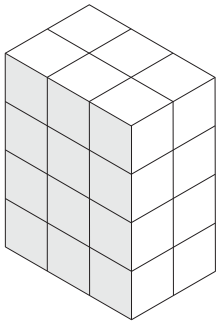
(d)



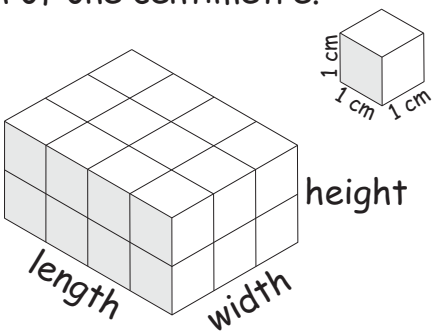
(e)



(f)



**2.** The block shown below is made using small cubes that have a side length of one centimetre.




(a) State the length, width and height (in centimetres) of the block.

| length | width | height |
|---|---|---|
| | | |

(b) Sketch below a block that is 4 cm long, 2 cm wide and 2 cm high.

(c) How many 1 cm cubes would be needed to make this block?

**1 litre (L) = 1000 millilitres (mL)**

**3.** Fill in the gaps below.

(a) 2 litres = _____ millilitres

(b) 5 litres = _____ millilitres

(c) $\frac{1}{2}$ litre = _____ millilitres

(d) 3000 millilitres = _____ litres

(e) 4 L = _____ mL

(f) 6 L = _____ mL

(g) $8\frac{1}{2}$ L = _____ mL

**4.** Fill in the gaps below with **L** or **mL**.

(a) Holly bought a 1 ___ carton of milk.

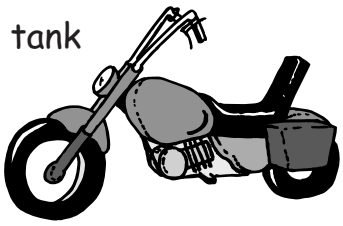
(b) Adam used a 10 ___ bucket of water to clean his car.

(c) Addy had to take 20 ___ of cough medicine.

(d) Tilly was making a cheesecake and the recipe asked for 300 ___ of cream.

(e) Greta bought a $1\frac{1}{2}$ ___ bottle of fruit juice.

(f) The petrol tank on Steve's motor bike held 15 ___.



(g) Sally had a fish tank that held 200 ___ of water.

(h) A drinking glass holds 200 of water.

**5.** How many 200 mL drink bottles could be filled from a 1 L carton?

**6.** Johnny needed 2 litres of paint to fill four identical jars.
How many millilitres were in each jar?

mL

**7.** To make one litre of pink paint Kane mixed 200 mL of red paint with white paint.
(a) How many millilitres of white paint would Kane need to make the one litre of pink paint?

mL

(b) If Kane had 500 mL of red paint, how many litres of white paint would he need to make the same colour pink?

mL

# MASS

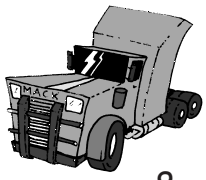
MARK

# 27

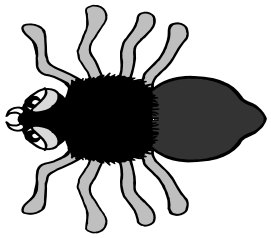
**1.** Complete the mass of the objects below by writing **grams**, **kilograms** or **tonnes** in the spaces provided.

(a) 

8 _____

(b) 

8 _____

(c) 

8 _____

(d) 

45 _____

**2.** From the following list, match the correct mass with the objects below.

**10 kg** **1000 kg** **1 kg** **150 g** **50 g** **3 tonnes** **150 kg** **5 tonnes**

| Object | Mass |
|---|---|
| Largest dog | |
| Ten litres of water | |
| Adult African elephant | |
| Adult Indian elephant | |
| Tennis ball | |
| Car | |
| Adult human brain | |
| Cricket ball | |

**1 kilogram (kg) = 1000 grams (g)**

**3.** Fill in the gaps below.

(a) 3 kg = _____ g

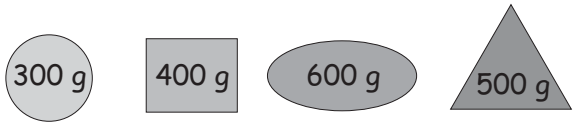
(b) 7 kg = _____ g

(c) $\frac{1}{2}$ kg = _____ g

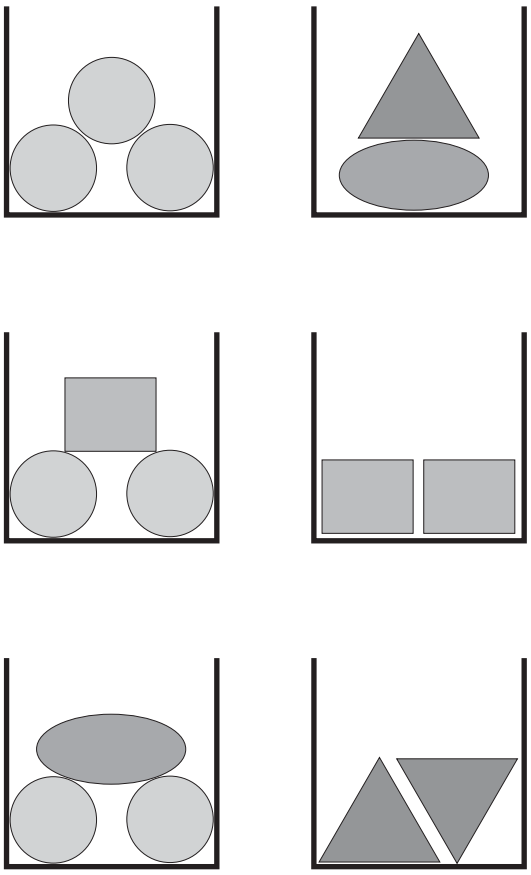
(d) 2000 g = _____ kg

(e) 8000 g = _____ kg

**4.** Four different blocks and their masses are shown below.




Boxes containing different numbers of these blocks are shown below. Colour in the boxes that would have a mass **greater than 1 kg**.



**5.** Ben went to a fruit and vegetable market and bought a pineapple that weighed 1.5 kg.
Can you think of three other fruits or vegetables that weigh more than 1 kg.

_____

_____

_____

**6.** While at the fruit and vegetable market Ben saw three different people selling cherries.

Charlie was selling cherries for $1.20 for 500 grams.

Chester was selling cherries for $4.60 for 2 kilograms.

Chuck was selling cherries for $10.50 for 5 kilograms.

(a) What would it cost to buy 1 kg of cherries from each of the cherry sellers?

Charlie

Chester

Chuck

(b) Which of the fruit sellers sells the cheapest cherries?

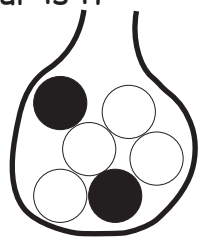
 

# CHANCE

MARK

# 28

**1.** (a) After shaking this bag and picking a ball, what colour is it **more likely** to be?



**A** White
**B** Black

(b) One person is chosen from the list of people below. It is **more likely** to be a:

**A** Boy
**B** Girl

**Lucy Matthew**
**Justin Richard**
**Belinda Sharon**
**Bruce Jason**

(c) One number is chosen from the numbers below. It is **more likely** to be:

**A** More than 20
**B** Less than 20

**14 10 58 63**
**31**
**19 40**
**26**
**9**

**2.** For the events below write if each is either:

impossible
unlikely
a 50-50 chance
likely
certain

(a) It will rain tomorrow.

(b) It will rain during the next school holidays.

(c) Heads will turn up if you toss a coin.

(d) Your teacher could throw a tennis ball 500 metres.

(e) Next time you visit the dentist you will need a filling.

**3.** A box of chocolates contains the following flavours:

**1 turkish delight**
**6 strawberry**
**3 caramel**
**2 peppermint**
**4 toffee**

If you closed your eyes and picked a chocolate, list the flavours in order from the one **most likely** to be picked to the one **least likely** to be picked.

Most likely _____

_____

_____

_____

Least likely _____

**4.** A game at a school fete involved opening a box randomly from the pile shown below. The prize in each box is shown.

| | | | | | |
|---|---|---|---|---|---|
| Ball | Book | Book | Ball | Music CD | Book |
| Ball | Ball | Music CD | Book | Ball | Ball |
| Music CD | Book | Ball | Computer Game | Ball | Book |

List the prizes in order from the one **most likely** to be won to the one **least likely** to be won.

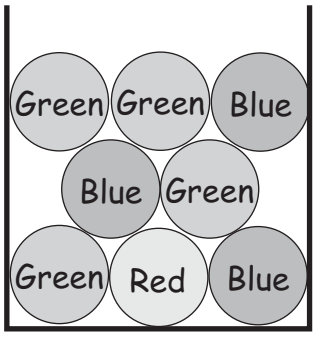
Most likely _____

_____

_____

Least likely _____

**5.** A ball is chosen randomly from this box. List the colours in order from the one **most likely** to be chosen to the one **least likely** to be chosen.



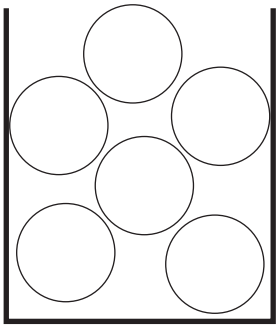

Most likely _____

_____

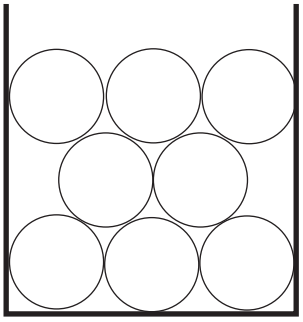
Least likely _____

**6.** Colour in the balls in the following boxes to match the statements shown.

(a) There are red, yellow and blue balls in this box.
**Red** is the **most likely** colour to be chosen.
**Blue** is the **least likely** to be chosen.



(b) There are red, green, yellow and blue balls in this box.
**Red** is the **most likely** colour to be chosen.
**Blue** is the **least likely** colour to be chosen.
There is the **same likelihood** of choosing **green** and **yellow**.



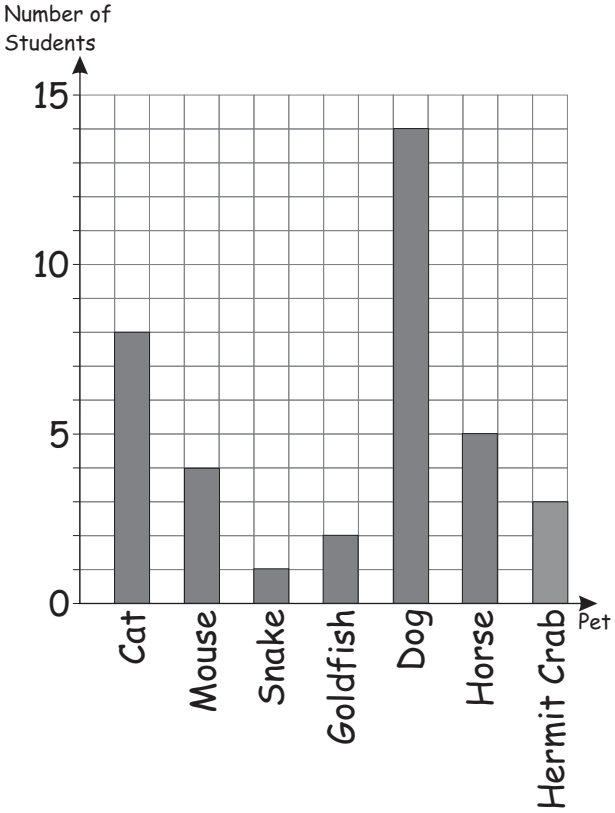
 

# DATA 1

MARK

29

1. All the students in grade 5 at a school were asked to name their favourite pet.
The results are shown on this graph.

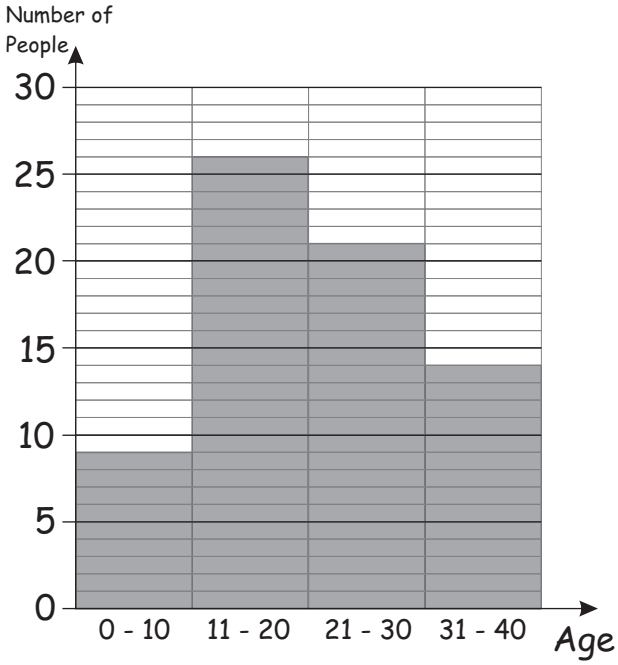



(a) How many students chose each pet?

| Pet | Number |
|---|---|
| Cat | |
| Mouse | |
| Snake | |
| Goldfish | |
| Dog | |
| Horse | |
| Hermit Crab | |

(b) How many students are in grade 5 at this school?

2. The ages of people at a theatre are shown on the graph below.




(a) How many people were in each age group?

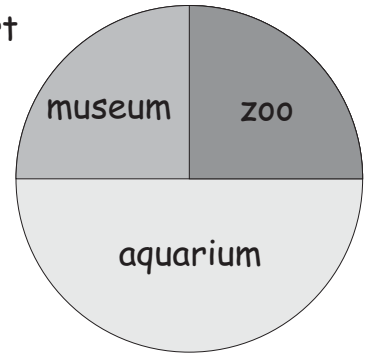
| Age Group | Number |
|---|---|
| 0 - 10 | |
| 11 - 20 | |
| 21 - 30 | |
| 31 - 40 | |

(b) How many people older than 20 were at the theatre?

(c) What is the total number of people at the theatre?

**3.** Forty students were asked if they wanted to go to the zoo, museum or aquarium for an excursion.

This pie chart shows how many students chose each one.




How many students chose each of the excursions?

Zoo ☐

Museum ☐

Aquarium ☐

**4.** The table below shows how 200 students came to school.

| Way of Getting to School | Number of Students |
|---|---|
| Bus | 18 |
| Walk | 62 |
| Car | 89 |
| Bicycle | 31 |

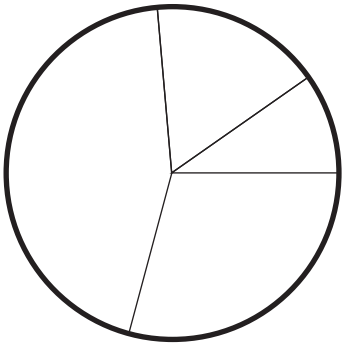
Choose your own colours to colour in the pie chart and legend.

☐ Bus

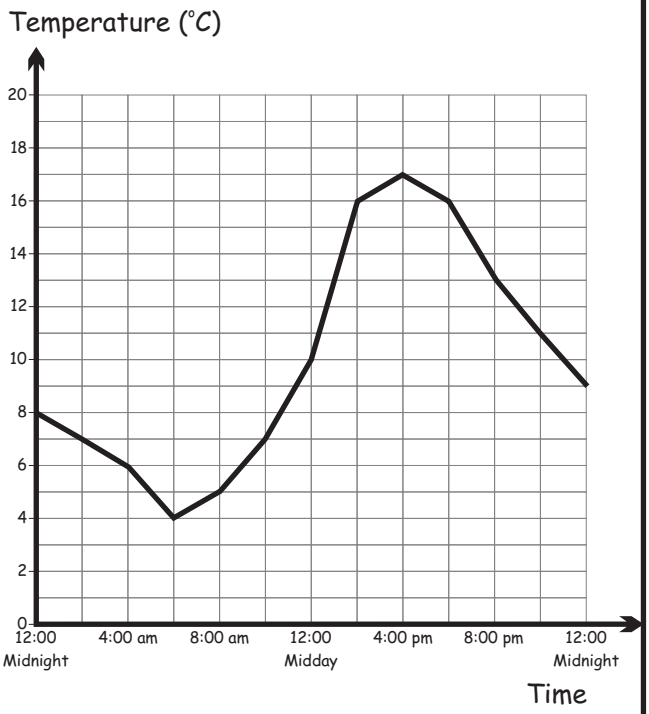
☐ Walk

☐ Car

☐ Bicycle



**5.** The temperature in a town was measured every two hours for a day. These measurements are shown on the graph below.




(a) What was the temperature at the following times?

(i) 4:00 am ☐

(ii) 12:00 midday ☐

(iii) 8:00 pm ☐

(b) At what time was the temperature 17°C? ☐

(c) (i) What was the minimum temperature? ☐

(ii) At what time was the minimum temperature? ☐

# DATA 2

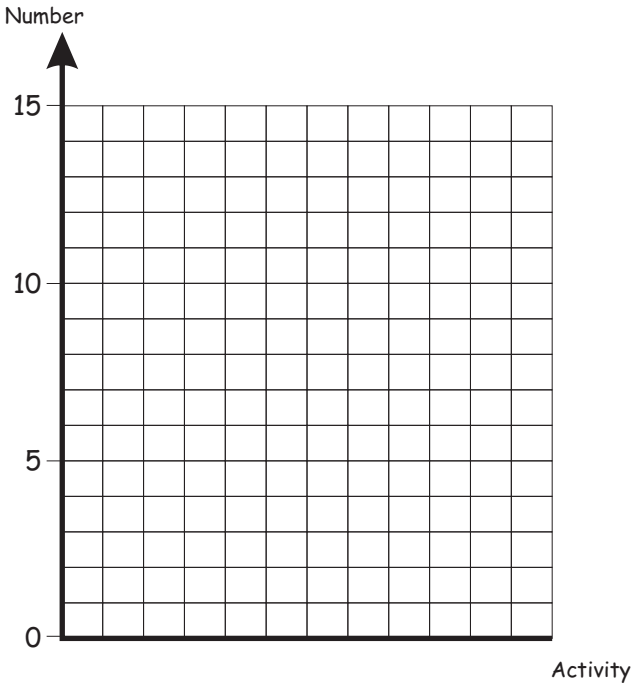
MARK

30

**1.** A number of students were on a beach camp.
The table below shows how many students wanted to join each activity on a particular day.

| Activity | Number |
|---|---|
| Cricket | 13 |
| Volleyball | 10 |
| Rock Pool Crawl | 6 |
| Swimming | 9 |
| Surfing | 3 |
| Making Sand Castles | 12 |

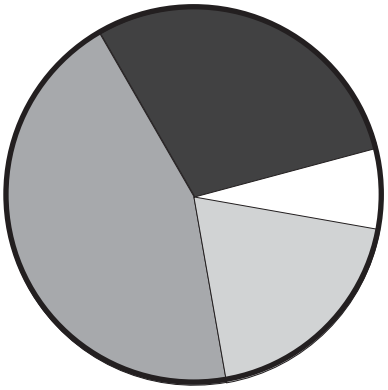
Display this information on the column graph below.




**2.** 100 people were asked how the water was heated in their house.
This table shows the results.

| Heater | Number |
|---|---|
| Electricity | 30 |
| Gas | 19 |
| Solar | 45 |
| Other | 6 |

The pie graph below displays this information. Complete the graph by stating which form of heating is represented by each section.



**3.** A lizard expert recorded the types of lizards she saw as she walked around a park.
A tally sheet of her findings is shown below.
Complete the tally sheet by filling in the number of each type of lizard seen and the total number of lizards.

| Lizard | Tally | Number |
|---|---|---|
| Skink | 卌 卌 卌 II | |
| Blue-tongue | 卌 卌 I | |
| Shingle Back | 卌 IIII | |
| Bearded Dragon | 卌 II | |
| Gecko | IIII | |
| Monitor | 卌 I | |
| | Total | |

**4.** Complete the tally sheet below for the following heights (in cm) of 50 students.

131 149 128 143 151 145 137 129
142 139 146 140 132 151 148 143
132 137 140 150 142 126 134 139
142 159 153 130 147 152 143 134
150 123 158 142 152 142 141 135
156 141 153 136 147 143 152 133
130 144

| Height (cm) | Tally | Number |
|---|---|---|
| 120 - | | |
| 130 - | | |
| 140 - | | |
| 150 - | | |
| | Total | |

**5.** Think of a survey question that requires a **YES** or **NO** answer.
Write the question below.

_____

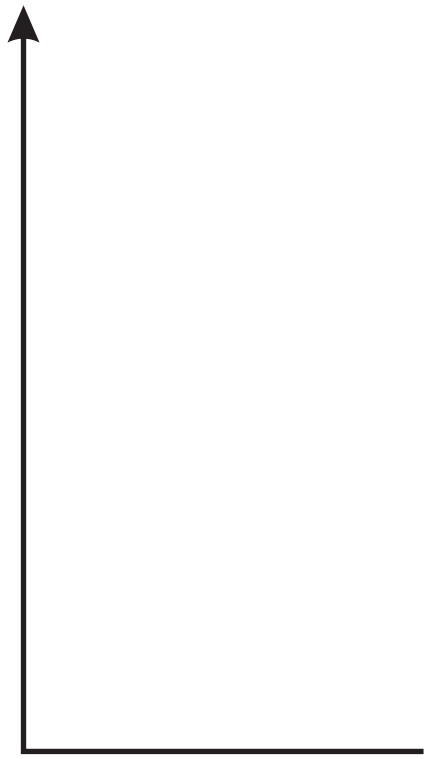
_____

_____

Ask 20 people the question and record the responses on the table below.

| Response | Tally | Number |
|---|---|---|
| YES | | |
| NO | | |
| | Total | |

Complete the column graph below displaying your results.



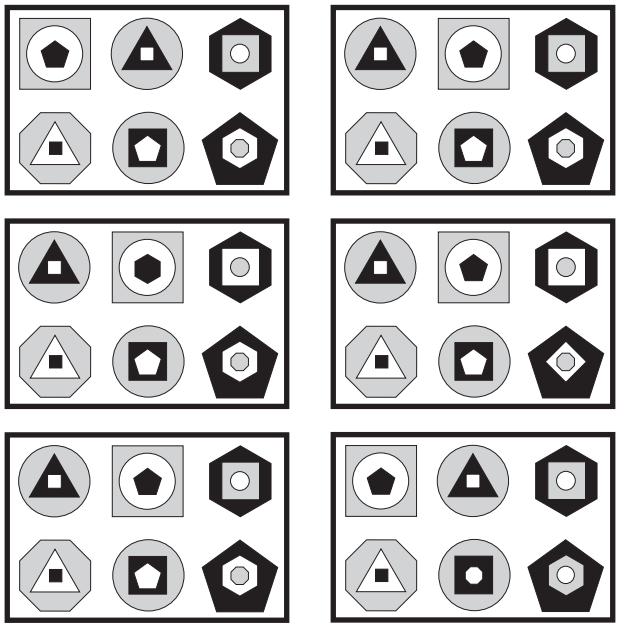
 

# PROBLEM SOLVING 1

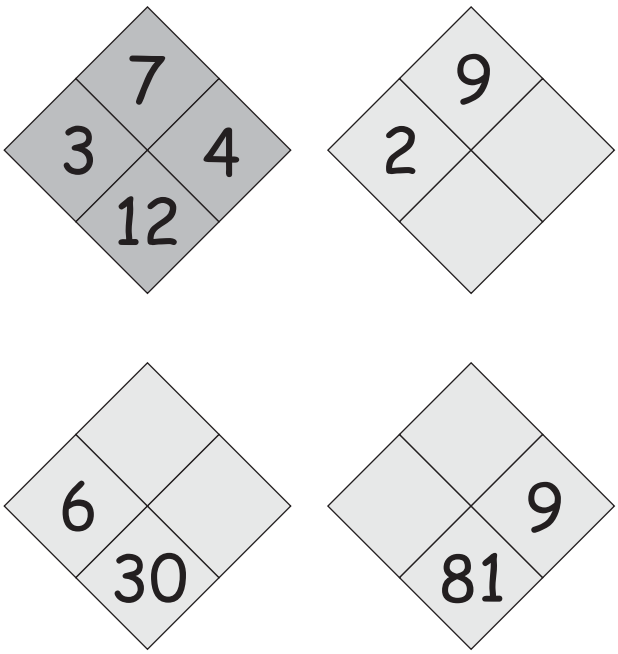
MARK

# 31

**1.** Colour in the two boxes below that are exactly the same.



**2.** Use the links between the numbers in the first diamond to complete the other three diamonds.

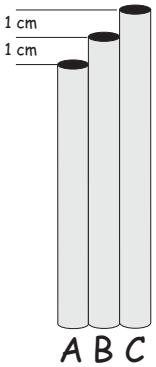



**3.** Raphael had a 36 cm length of pipe that he wanted to cut into three pieces: A, B and C.
B is **1 cm** longer than A.
C is **1 cm** longer than B.
Find the length of the three pipes.

A ____ cm

B ____ cm

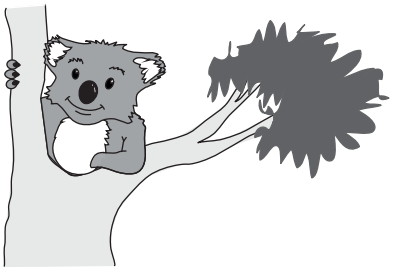
C ____ cm




**4.** Alicia was looking out of her kitchen window at 9 o'clock one morning and saw her brother outside as shown below.
Is Alicia's kitchen window facing north or south?

**5.** A koala could climb a tree at the rate of one metre every second but had to stop every five seconds for a ten second rest.
How many seconds would it take the koala to climb 20 metres?

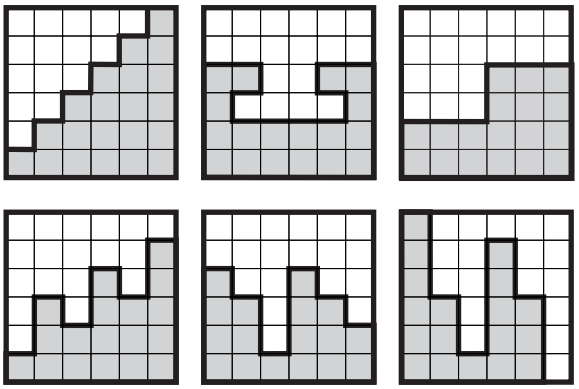


**6.** Venus wanted to buy 10 fish for her fish tank. She had saved $24 and decided to spend all of this on the fish.
At the pet shop goldfish cost $2 each and guppies cost $3 each.
How many of each fish could she buy if she spent $24?
(Remember she is buying **10** fish)

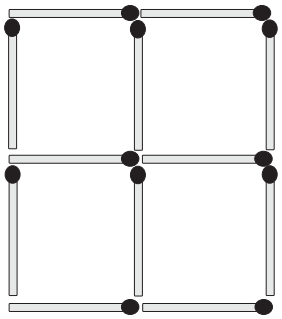
Goldfish

Guppies

**7.** Colour in those squares below that if cut into the two shapes shown would form two identical shapes.



**8.** (a) Show which **two** of the matches in the diagram below could be **removed** to leave **two** squares.



(b) Redraw the matches but with **four moved** to form **three** squares.

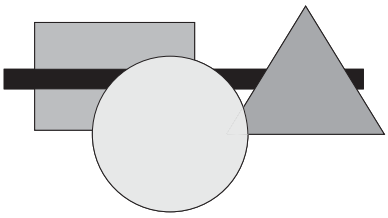
 

# PROBLEM SOLVING 2

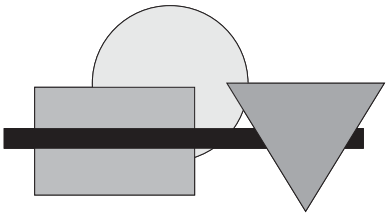
MARK

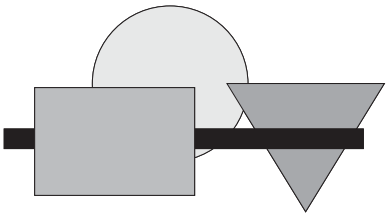
# 32

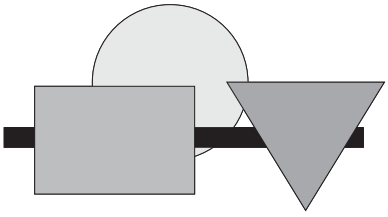
**1.** The following cardboard shapes are arranged on a glass table. The view shown here is from **above** the table.

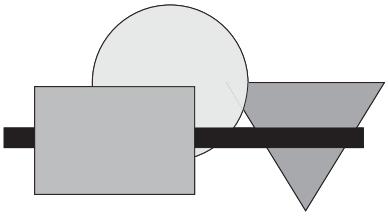


Circle the diagram below that shows what these shapes would look like from **under** the table?



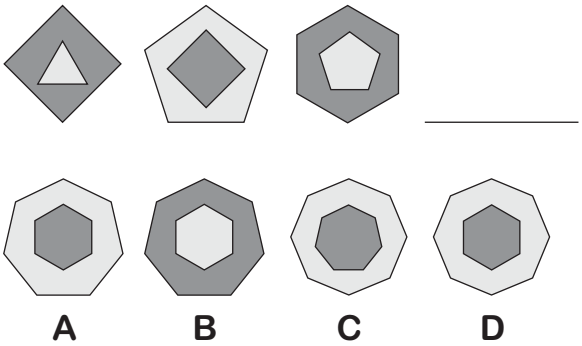






**2.** Aiden's watch gains one minute every hour.
Aiden sets his watch to the correct time at 8.00 am.
What time will Aiden's watch show at 8.00 pm on the same day?

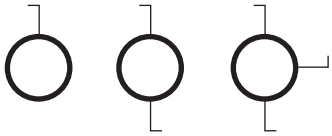
**3.** Which of the shapes below (**A** - **D**) would complete the following pattern:




**4.** Complete the following patterns:

(a) 1 2 3 4 5 _____

(b) O T T F F S S _____

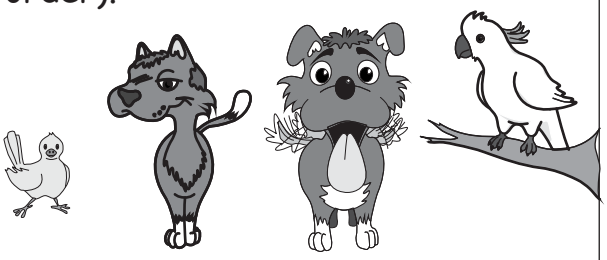
(c)  _____

**5.** Styron is four years older than his brother Seth. Their mother is three times Styron's age and five times Seth's age.
How old are Styron, Seth and their mother?

| | |
|---|---|
| Styron | |
| Seth | |
| Mother | |

**6.** Andrew, Amy, Bryan and Barbara each have a pet and the four pets are shown below (in no particular order).



Use the information below to find out who owns each pet.

* Andrew's pet has four legs
* The cat's owner is a girl
* Amy's bird is next to Andrew's pet

| | |
|---|---|
| Canary | |
| Cat | |
| Dog | |
| Cockatoo | |

**7.** Four coconuts and one pineapple weighed 11 kg.
One coconut and one pineapple weighed 5 kg.
Find the weight of a coconut and a pineapple.

| | |
|---|---|
| Coconut | |
| Pineapple | |

**8.** Use four fours and any of the operations (×, ÷, +, –) and brackets to complete the following equations. Three examples are given:

$(4 + 4) \div (4 + 4) = \mathbf{1}$

$(4 \div 4) + (4 \div 4) = \mathbf{2}$

$(4 \times 4) + 4 + 4 = \mathbf{24}$

_____ = **8**

_____ = **3**

_____ = **9**

_____ = **17**