

1 There are 2076 people at a concert.

a Write down the value of the digit 7 in the number 2076.

.....
(1 mark)

b Write the number 2076 to the nearest hundred.

.....
(1 mark)

c One third of the people at the concert are under 30 years old.
How many people are under 30 years old?

.....
(2 marks)

2 A shop sells birthday cards.
Each card has a code that shows the price.
This table shows the codes and the prices of some of the cards.

Code	A	B	C	D	E	F
Price (£)	1.40	1.60	1.75	2.10	2.55	2.80

a Ali buys two cards, one has code B, the other has code E.
How much does he pay altogether?

.....
(1 mark)

b Ali pays with a £10 note.
How much change does he receive?

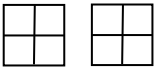
.....
(1 mark)


c Beth buys two cards.
She pays £4.20 altogether.
What cards does she buy?
There are **two** possible answers.

.....
(1 mark)

.....
(1 mark)

- 3 In a survey, some people were asked, 'What is your favourite type of TV programme?'
The pictogram shows the results of the survey.

Quiz shows	
Soaps	
Cookery	
Sport	
Other	

Key:  = 4 people

- a How many people chose soaps?

.....
(1 mark)

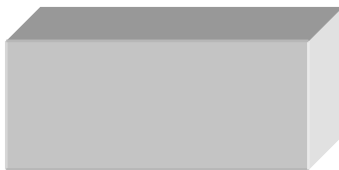
- b How many more people chose cookery than quiz shows?

.....
(1 mark)

- c 18 people chose sport.
Complete the pictogram for sport.

(1 mark)

- 4 Here is a cuboid.



- a How many faces does the cuboid have?

.....

(1 mark)

- b How many edges does the cuboid have?

.....

(1 mark)

- c The cuboid is cut in half through four of its corners.
This is one half of the cuboid.

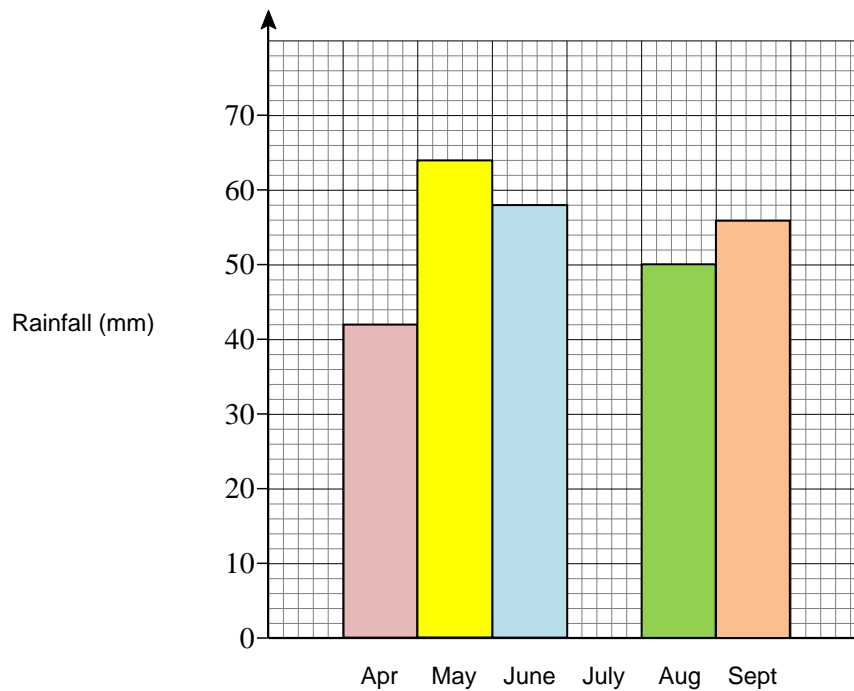


How many rectangular faces does this shape have?

.....

(1 mark)

- 5 The bar chart shows average rainfall in Paris for the six-month period from April until September.



- a What is the average rainfall for June?

..... mm

(1 mark)

- b How much more rain, on average, fell in August than in April?

..... mm

(1 mark)

- c In July the average rainfall is 54 mm.
Draw the bar for July on the bar chart.

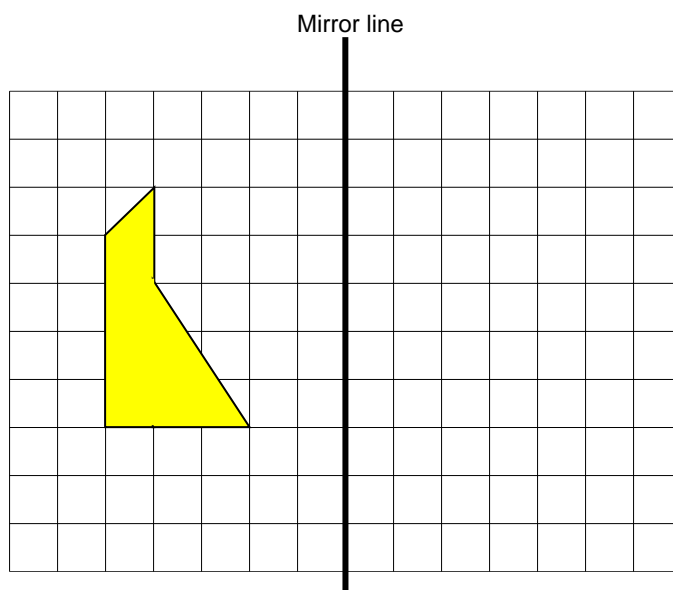
(1 mark)

- d What is the range of the average rainfall for these months?

..... mm

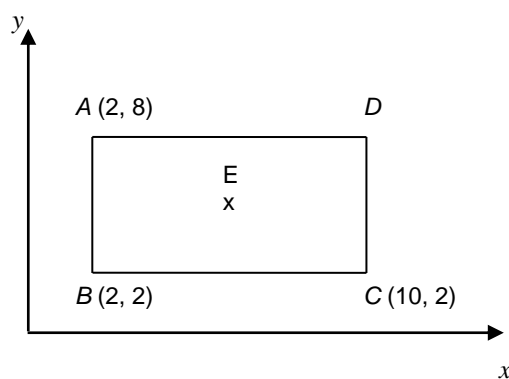
(1 mark)

- 6 Reflect the shape in the mirror line.



(2 marks)

- 7 $ABCD$ is a rectangle.



Not drawn accurately.

- a Work out the coordinates of D .

.....
(1 mark)

- b Work out the length of BC .

..... units
(1 mark)

- c Work out the area of the rectangle.

..... units²
(1 mark)

- d** E is the centre of the rectangle.
Work out the coordinates of E.

.....
(1 mark)

- 8** Put these decimals in order, starting with the smallest.

0.613 0.08 0.4 0.361 0.27

.....
(2 marks)

- 9** Here is a list of numbers.

8 15 26 29 36 39 42 45

- a** Which number is a square number?

.....
(1 mark)

- b** Which number is a multiple of 7?

.....
(1 mark)

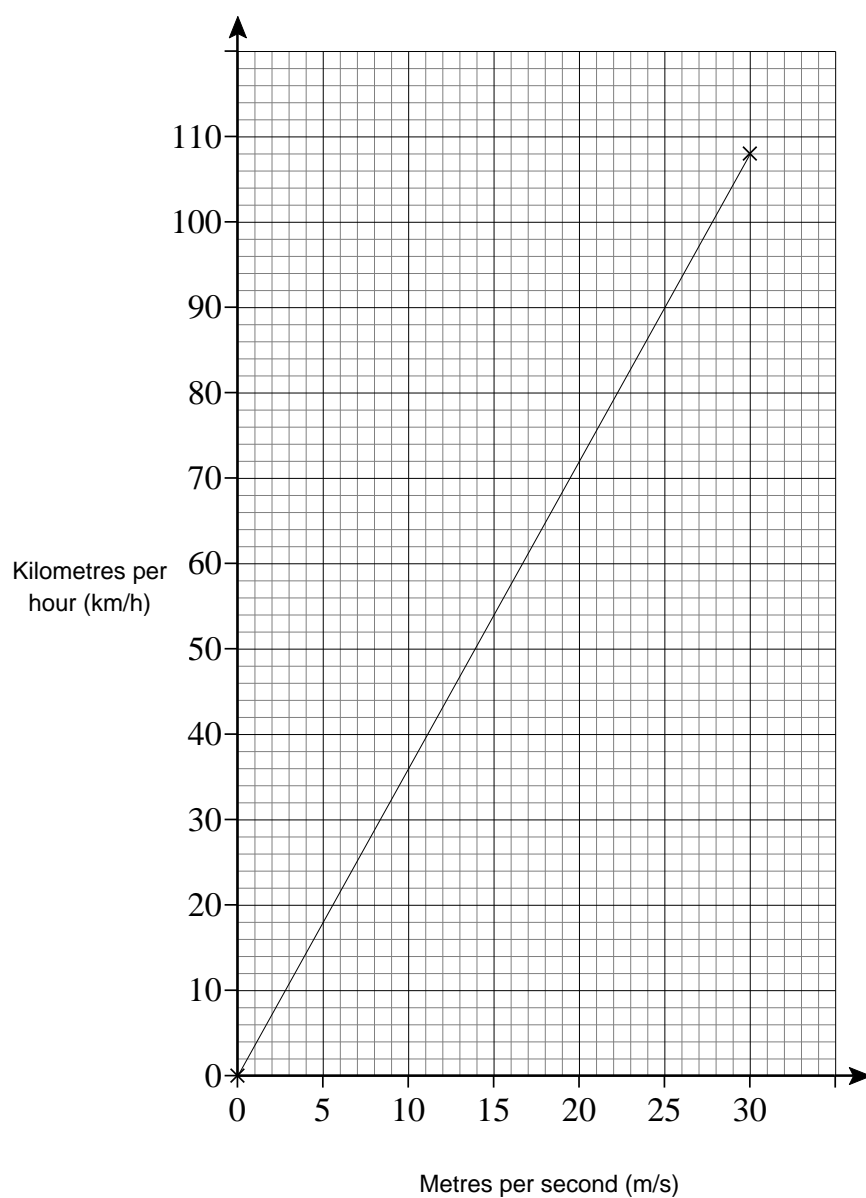
- c** Which number is a factor of 60?

.....
(1 mark)

- d** Which number is a prime number?

.....
(1 mark)

10 Here is a conversion graph.



a Use the graph to convert 90 km/h to m/s.

..... m/s

(1 mark)

b Use the graph to convert 10 m/s to km/h.

.....km/h

(1 mark)

- c A swift can fly at 160 km/h.
What is this speed in m/s?
Show clearly how you worked out your answer.

.....
(2 marks)

- 11 Dave has 85p.
Ellie has £1.43
How much should Ellie give to Dave so that they both have the same amount of money?

.....
(2 marks)

12 These patterns are made from sticks.



Pattern 1



Pattern 2



Pattern 3

a Draw Pattern 4.

(1 mark)

b Complete the table.

Pattern number	1	2	3	4	5
Number of sticks	2	6	10		

(2 marks)

c Write down a rule for continuing the number of sticks in a pattern.

.....

(1 mark)

d Which pattern will have 38 sticks?

.....

(1 mark)

- e Explain why you **cannot** make a pattern with exactly 48 sticks.

.....

.....

.....

(1 mark)

- 13 Here are the test marks for ten students.

4 7 9 6 6 7 8 4 3 4

For this data, work out:

- a the mode

.....

(1 mark)

- b the median

.....

(1 mark)

- c the mean.

.....

(1 mark)



- 14 Online admission prices for a theme park are:

Adult	£19.50
Children	£12.50

Two adults made a booking for themselves and a group of children.
The total bill was £201.50

How many children were in the group?
Show working to justify your answer.

.....

(4 marks)

- 15 Mark and Nick work out $\frac{10.3+4.1^2}{7.9}$ on their calculators.

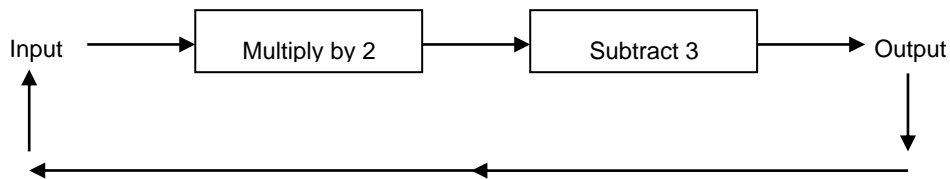
Mark gets an answer of 12.427 ...

Nick gets an answer of 3.434 ...

Use **approximations** to show which one of them is correct.

.....
(3 marks)

- 16 This flow diagram is used to work out the terms of a sequence.
An output becomes the next input.



Starting with an input of 5, work out the **next four** terms of the sequence.

.....
(3 marks)

- 17 a $h = -5$ and $w = 2$
Work out the value of $4h - 3w$

.....
(2 marks)

- b Solve $2x - 3 = 20$

.....
(2 marks)

- 18 Amy and Clare share some money in the ratio 3 : 2
Amy gets the larger share of £18
How much does Clare get?

.....
(2 marks)



- 19 Here are two ways of downloading music.

89p for each
track

£13.99 per month
All downloads free
Minimum contract two years

Rachel estimates that she will download 400 tracks over the next two years.

Which is the cheaper option for Rachel?
Show working to justify your answer.

.....
(4 marks)

- 20 a Which two of these fractions are equivalent to $\frac{3}{4}$?

$\frac{5}{6}$ $\frac{8}{12}$ $\frac{12}{16}$ $\frac{16}{20}$ $\frac{18}{24}$

.....
(2 marks)

- b Work out $\frac{2}{5}$ of £65

.....
(2 marks)

- 21 Here is some information about 50 people who took the driving test:

18 of the 50 people are women.

One quarter of the men failed the driving test.

The number of men who passed the driving test was 8 more than the number of women who passed the test.

- a Use this information to complete this two-way table.

	Pass	Fail	Total
Male			
Female			18
Total			50

(4 marks)

- b A person is chosen at random.
What is the probability that they passed the driving test?

.....
(1 mark)

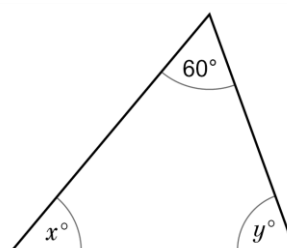


- 22** Car A travels 105 miles on 3 gallons of petrol.
Car B travels 80 miles on 9 litres of petrol.

Which car has the better petrol consumption (ie more miles per gallon)?
You may use the fact that 1 gallon = 4.5 litres.

.....
(3 marks)

- 23** Here is a triangle, with angles of x , y and 60° .



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Given that $y = 2x$, work out the values of x and y .

$x = \dots\dots\dots y = \dots\dots\dots$

(3 marks)