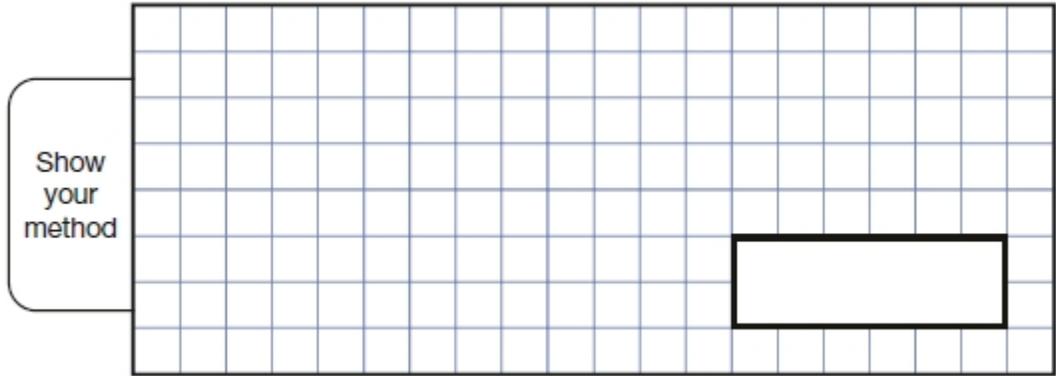


1

Lara chooses a number less than 100.
She divides it by 3 and then subtracts 11.
She then divides this result by 2.
Her answer is 10.
What was the number she started with?

Show your method



2 marks

2

Write the missing digits to make the addition correct.


$$\begin{array}{r} \boxed{1} \boxed{} \boxed{1} \\ + \boxed{} \boxed{1} \boxed{} \\ \hline \boxed{9} \boxed{0} \boxed{0} \end{array}$$

1 mark

3

Write the missing number in the sequence

273 001 283 001 293 001

2 marks

4

$$\boxed{} \times 10 = 350.5$$

$$460 \div \boxed{} = 4.6$$

$$2.3 \times \boxed{} = 2300$$

2 marks

5

Write in the missing number.

$$3400 \div \boxed{} = 100$$

1 mark

6Write the correct sign $>$, $<$ or $=$ in each of the following.

$$(10 + 5) - 9 \quad \boxed{} \quad (10 + 9) - 5$$

$$3 \times (4 + 5) \quad \boxed{} \quad (3 \times 4) + 5$$

$$(10 \times 4) \div 2 \quad \boxed{} \quad 10 \times (4 \div 2)$$

2 marks

7Write what the **two missing** numbers could be.

$$\boxed{} \div \boxed{} = 8$$

1 mark

Write what the **two missing** numbers could be.

$$(4 + \boxed{}) \times \boxed{} = 100$$

1 mark

Write the missing number.

$$30 - 16 = 9 + \boxed{}$$

1 mark

8

$$23 \times 36 = 23 \times 9 \times \boxed{}$$

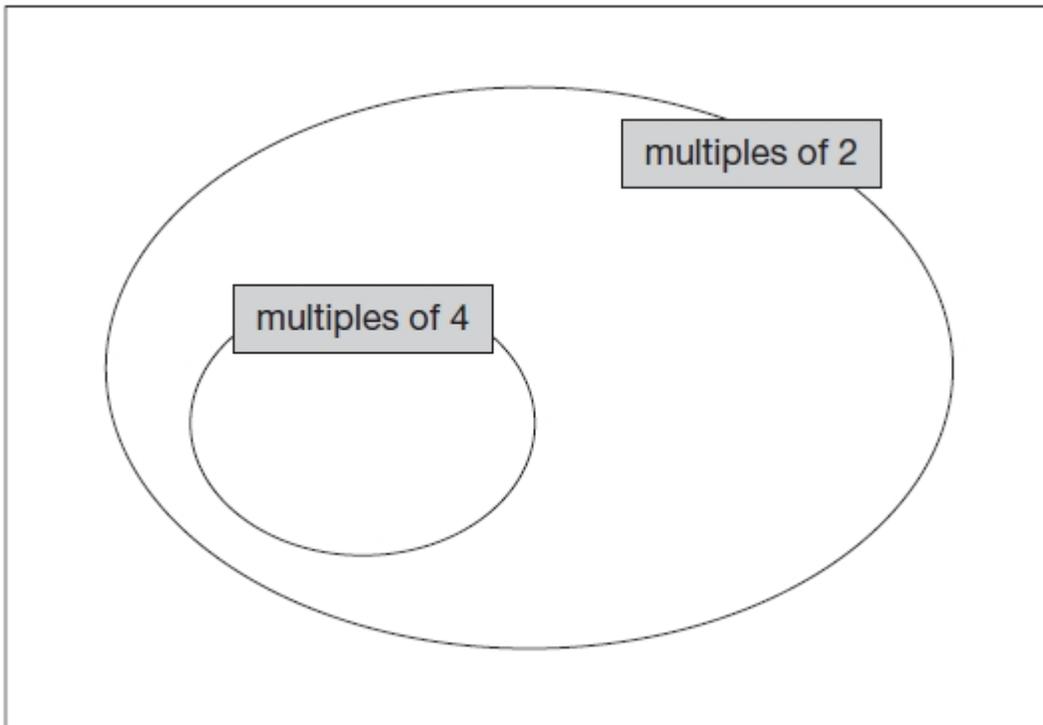
1 mark

9

Here is a Venn diagram for sorting numbers.

Write each number in its correct place on the diagram.

10 11 12 13



2 marks

10

Amir says,

'All numbers that end in a 4 are multiples of 4.'



Is he correct?

Circle **Yes** or **No**.

 Yes / No

Explain how you know.

A large, hand-drawn cloud-shaped area with a scalloped border, intended for the student to write their explanation.

1 mark

11

Look at these numbers written in Roman numerals.

MCMVII MMCD MDCCXLIII MMDX

Circle the **largest** number.

What is the value of the **smallest** number?

An empty rectangular box for the student to write the value of the smallest number.

2 marks

12

Dev says,

'When you halve any number that ends in 8 the answer always ends in 4.'



Is he correct?

Circle **Yes** or **No**.

Yes / No

Explain how you know.

1 mark

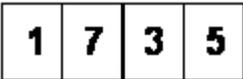
13

Arrangements

Here are some number cards:



You can use each card once to make the number 1735, like this:



(a) What is the **biggest** number you can make with the four cards?

Handwritten mark

1 mark

(b) Explain why you **cannot** make an **even** number with the four cards.

Handwritten mark

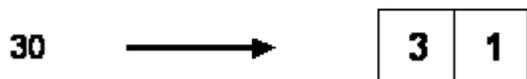
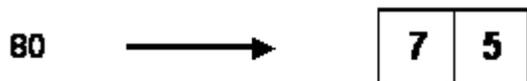
1 mark

(c)



Use some of the four number cards to make numbers that are **as close as possible** to the numbers written below.

Examples



You must **not** use the same card more than once in each answer.

Handwritten mark



1 mark

Handwritten mark



1 mark

الاجابة

4000



--	--	--	--

1 mark

الاجابة

1500



--	--	--	--

1 mark

الاجابة

1600



--	--	--	--

1 mark

14

How many quarters are there in $2\frac{3}{4}$?

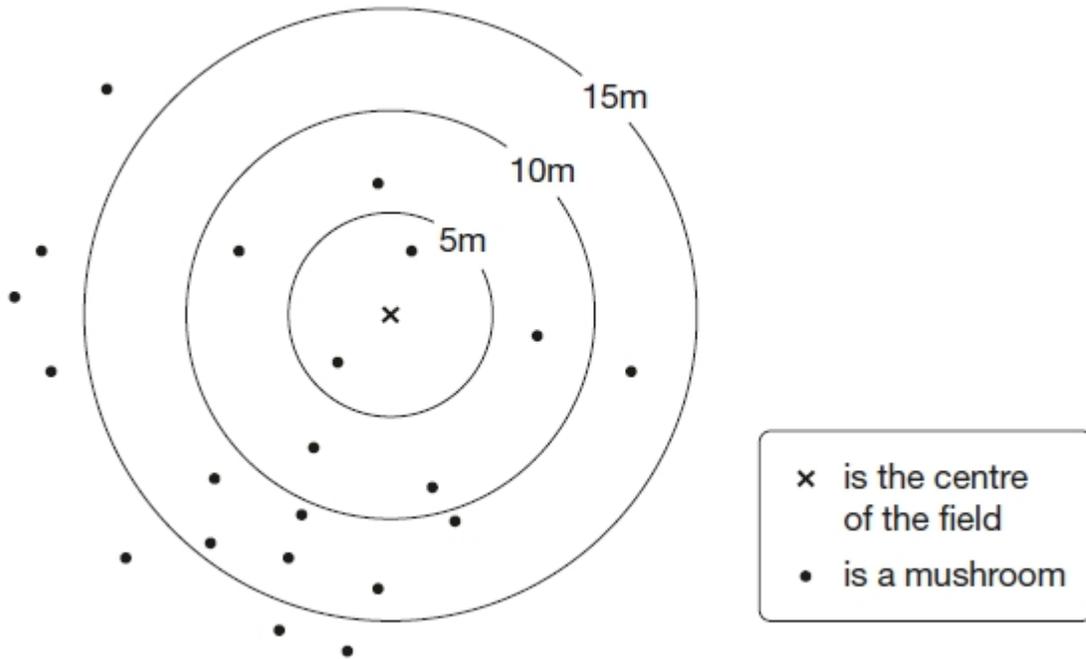
quarters

1 mark

15

Class 6 did a survey of mushrooms growing in a field.

The diagram shows the distances of mushrooms from the centre of the field.



How many mushrooms were more than 10 metres from the centre?



1 mark

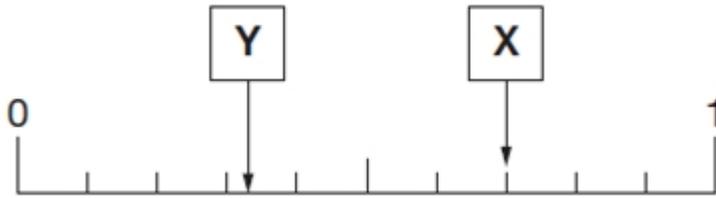
What **fraction** of the mushrooms were less than 10 metres from the centre?



1 mark

16

Here is a number line.



What is the value of X?

 $X =$

1 mark

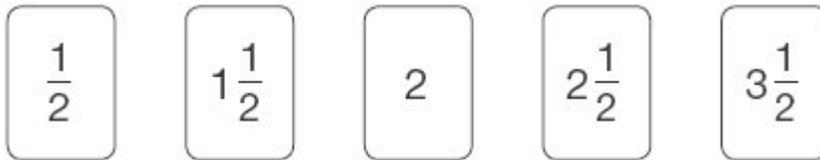
Estimate the value of Y.

 $Y =$

1 mark

17

Here are five number cards.



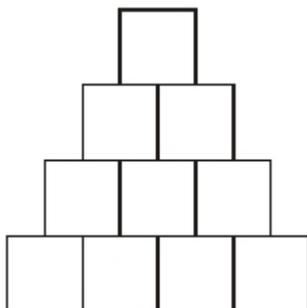
Use **three** of the number cards to make this calculation correct.

 $(\quad + \quad) \times \quad = 10$

1 mark

18

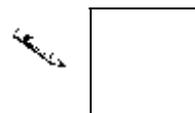
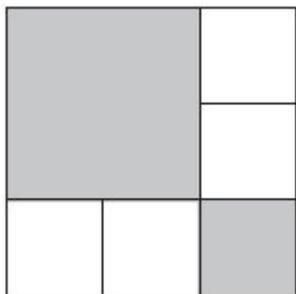
Shade $\frac{1}{5}$ of this shape.



1 mark

19 The diagram is made of squares.

What fraction of the diagram is shaded?



1 mark

20 Calculate $3.81 + 18.3$



1 mark

21 Calculate 45.3×6



1 mark

22 Calculate 60% of 765.



1 mark

23

A larger bottle of juice will hold **30% more** than this bottle.

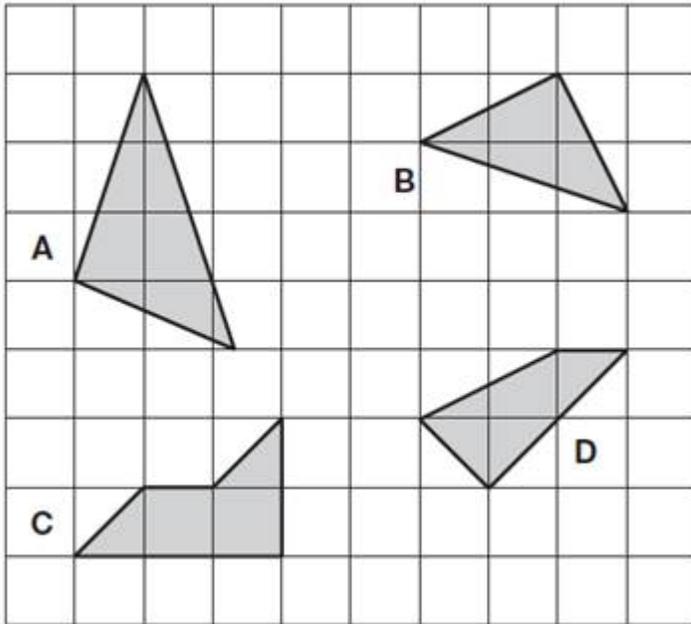


How much will the larger bottle hold?

Handwritten mark ml

1 mark

24 Here are four shapes on a square grid.

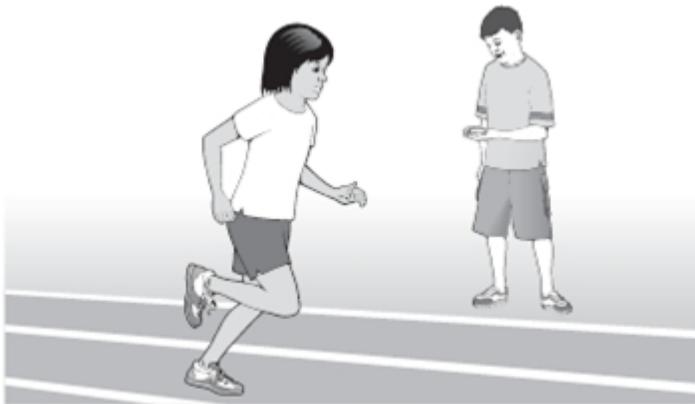


Write the letters of **all** the shapes that have **exactly two** sides which are equal in length.



2 marks

25



Kirsty ran a race in one and a half minutes.

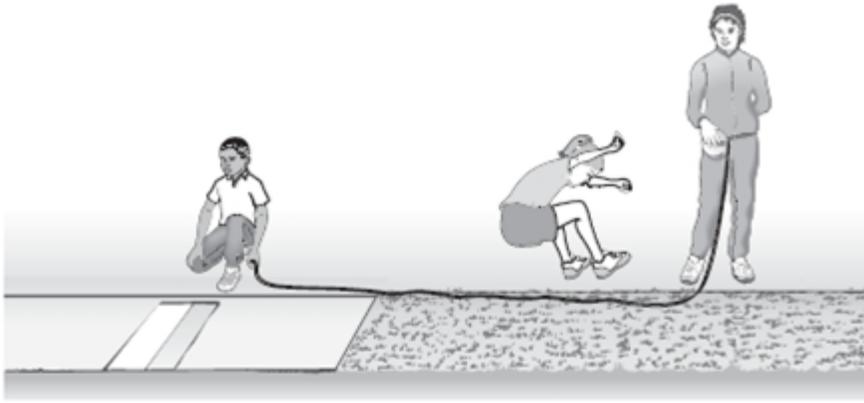
Mina took 10 seconds longer.

How many **seconds** did Mina take to run the race?



seconds

1 mark



Seb made a jump of two and a half metres.

Kirsty's jump was 10 centimetres longer.

How long was Kirsty's jump?



1 mark

26

Write these lengths in order, starting with the shortest.

$\frac{1}{2}$ m

3.5cm

25mm

20cm



shortest

1 mark

27

Here are four masses.

2
kilograms

1
tonne

800
grams

$\frac{1}{2}$
kilogram

Write the masses in order, starting with the lightest.

Handwritten mark

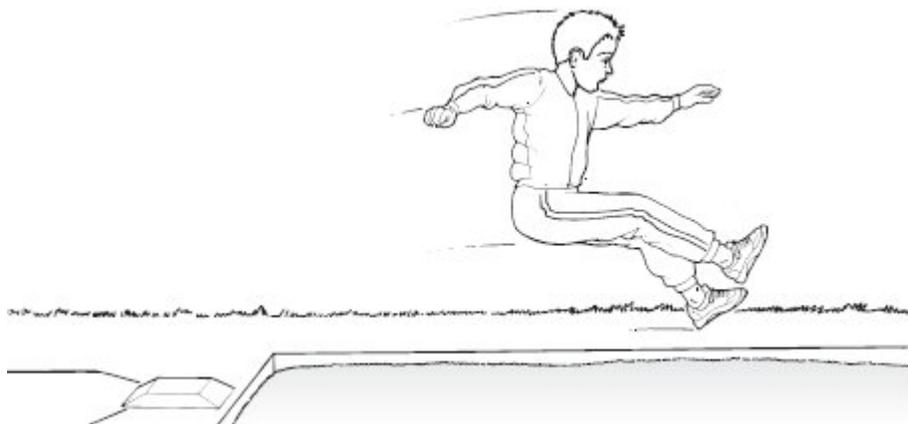
lightest

1 mark

28

Max jumped **2.25 metres** on his **second** try at the long jump.

This was **75 centimetres** longer than on his **first** try.



How far **in metres** did he jump on his **first** try?

Handwritten mark

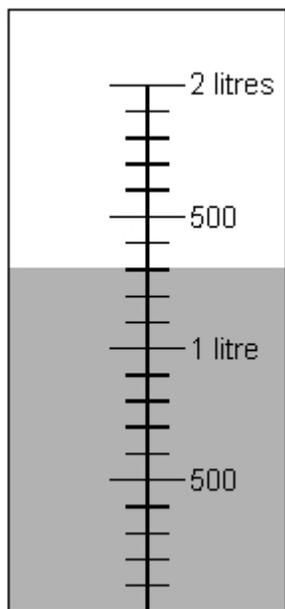
 m

1 mark

29

This is the scale on the side of a measuring jar.

There is some coloured water in the jar.



How much **more** water is needed to make **2 litres**?

Handwritten mark →

1 mark

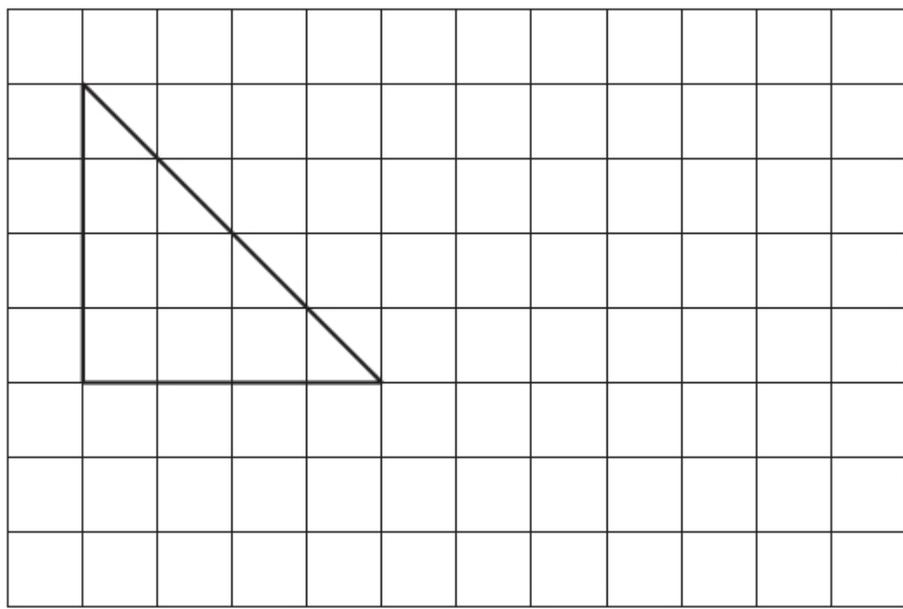
30

Here is a triangle drawn on a square grid.

Draw a **rectangle** on the grid with the same area as the triangle.

Use a ruler.

Handwritten mark

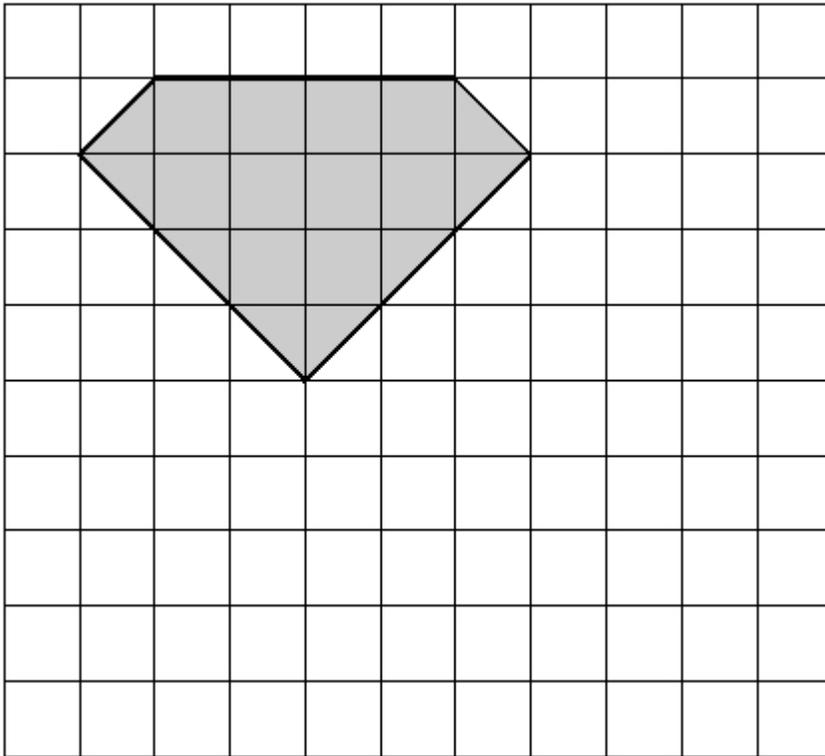


1 mark

31

On the grid, draw a **rectangle** which has the **same area** as this shaded pentagon.

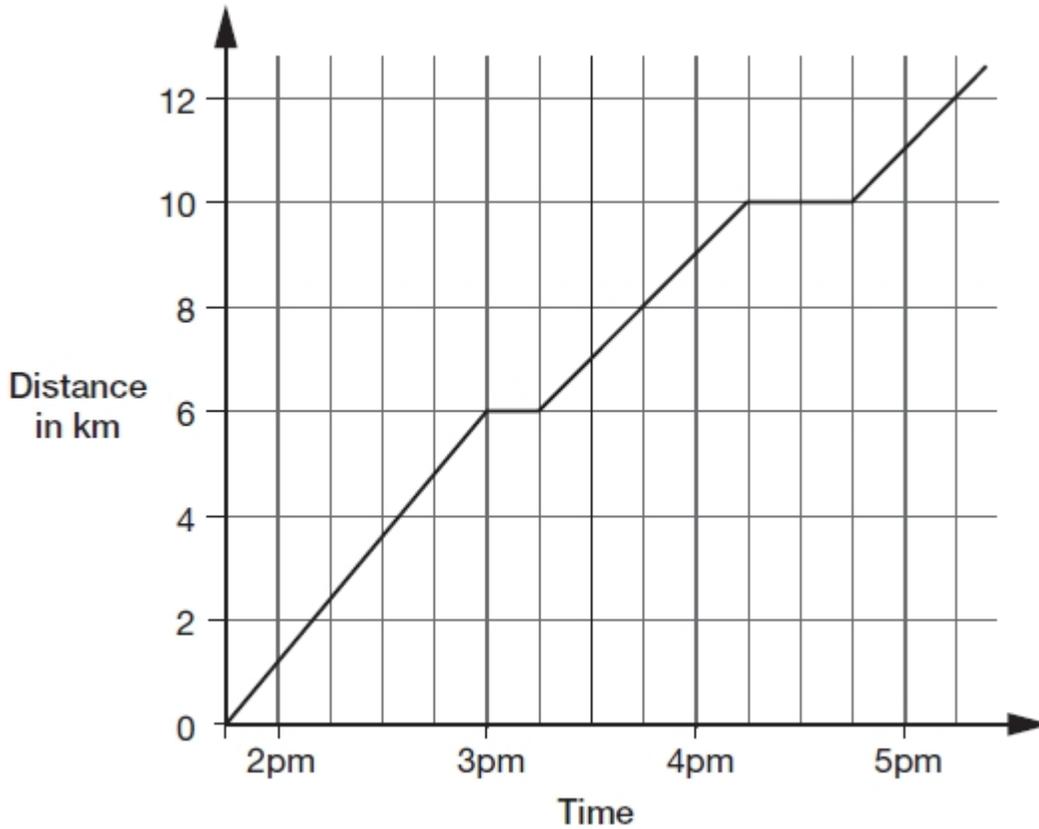
Use a ruler.



1 mark

32

This graph shows the distance Alfie and Chen walked in an afternoon. They started at 1:45pm and had two breaks.



How many kilometres did they walk **between** the first and second breaks?



km

1 mark

At what time did Alfie and Chen start their second break?



1 mark

33

The table below shows five journeys a taxi driver made one day.

journey number	start time	number of passengers	distance	cost
1	9:15 am	2	8 km	£7.50
2	9:40 am	1	12 km	£9.90
3	10:30 am	3	7 km	£7.60
4	10:50 am	1	21 km	£15.50
5	12:10 pm	4	15 km	£12.00

On journey number 5, the passengers shared the cost equally.

How much did **each** passenger pay?



1 mark

How many **passengers** made journeys of more than 10km?



1 mark

The 12km journey took 40 minutes.

What time did the taxi finish its journey?

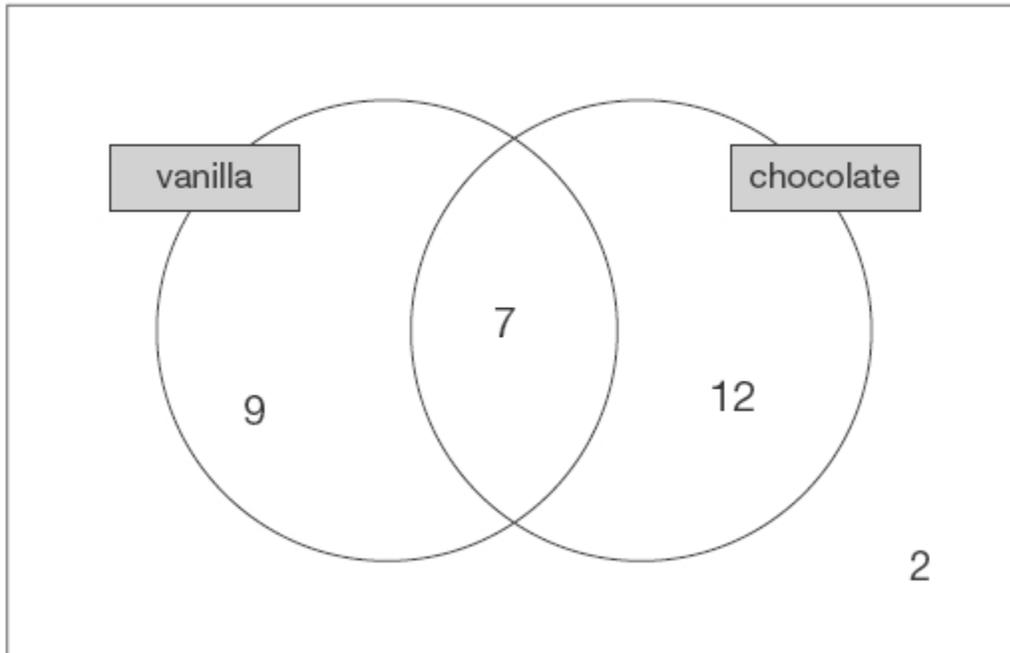


1 mark

34

Joe asked the children in his class which flavours of ice-cream they like.

He recorded the results in a Venn diagram.



How many children like chocolate ice-cream?

Handwritten mark

1 mark

How many children **do not** like vanilla ice-cream?

Handwritten mark

1 mark

Mark schemes

1

Award **TWO** marks for the correct answer of 96.

If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, e.g:

- $10.5 \times 2 = 21$
 $21 + 11 = 32$
 32×3

*Answer need not be obtained for the award of **ONE** mark.*

Up to 2

[2]

2

$$\begin{array}{r}
 \begin{array}{|c|c|c|} \hline 1 & 8 & 1 \\ \hline \end{array} \\
 + \begin{array}{|c|c|c|} \hline 7 & 1 & 9 \\ \hline \end{array} \\
 \hline
 \begin{array}{|c|c|c|} \hline 9 & 0 & 0 \\ \hline \end{array}
 \end{array}$$

[1]

3

263001
303001

1

1

[2]

4

All three correct
35.05
100
1000

or

Any two correct

2

1

[2]

5

34

[1]

6Award **TWO** marks for signs written in the order shown:

<

>

=

If the answer is incorrect, award **ONE** mark for two out of three signs correct.

Up to 2

[2]**7**

(a) Any two numbers such that the first is eight times the second, eg:

$$\boxed{16} \div \boxed{2} = 8$$

*Numbers must be in the correct order.**Accept $8 \div 1$* *Accept other recognised formats for writing a division problem only if all the numbers are shown in the correct location, eg:*

$$\frac{16}{2} = 8 \quad \text{OR}$$

$$\begin{array}{r} 8 \\ 2 \overline{)16} \end{array}$$

Accept correct fractions, decimals and negative numbers.

1

(b) Any two numbers which make the equation correct, eg:

$$(4 + \boxed{6}) \cdot \boxed{10} = 100$$

*Accept $(4 + 0) \times 25 = 100$.**Accept blank boxes provided the answer is elsewhere on the page.**Accept correct fractions, decimals and negative numbers.*

1

(c) $30 - 16 = 9 + \boxed{5}$

Accept blank box provided the answer is elsewhere on the page.

1

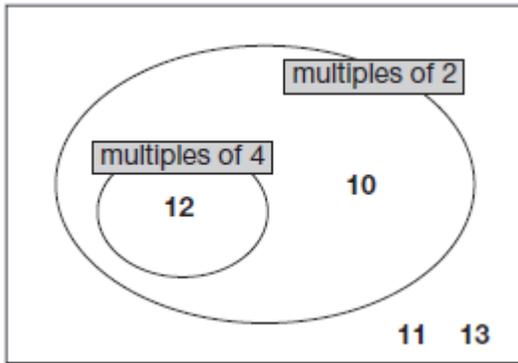
[3]**8**

4

[1]

9

Award **TWO** marks for all four numbers correctly placed as shown:



If the answer is incorrect, award **ONE** mark for three numbers correctly placed.

Accept alternative unambiguous indications, eg lines drawn from the numbers to the appropriate regions of the diagram.

Do not accept numbers written in more than one region

Up to 2

[2]

10

An explanation which gives a counter-example to illustrate that not all numbers ending in 4 are multiples of 4, eg:

- '14 is not a multiple of 4'
- '4, 24 and 44 are multiples of 4, but not 14 and 34'
- '14 or 34 don't work'
- '54'

OR

an explanation which recognises that only numbers ending in 4 which have an even number of tens are multiples of 4, eg:

- 'It has to have an even number of 10s as well, like 20 or 40'
- '14, 24, 34, 44, 54, 64 – only half of them are'
- '4 doesn't go into 10 so 14 isn't'.

No mark is awarded for circling 'No' alone.

Do not accept vague or incomplete explanations, eg:

- 'Some numbers end in a 4 but aren't multiples of 4'
- '16 doesn't end in 4'
- 'Not all multiples of 4 end in 4'
- '24 is a multiple of 4 but the next one isn't'
- '4, 8, 12, 16, 20, 24 etc'.

If 'Yes' is circled but a correct, unambiguous explanation is given, then award the mark.

U1

[1]

11

MMDX indicated

Do not accept MDCCXLIII

1

1743

1

[2]

12

An explanation which gives a counter-example to illustrate that halving a number that ends in 8 does not always give a number ending in 4, eg:

- '18 doesn't work'
- 'It could end in a 9'
- 'Double 49 is 98'
- ' $58 \div 2 = 29$ '
- 'Half of 8 is 4 but half of 18 doesn't end in 4'
- '18, 28, 38, 48, 58, 68 – only half of them work'
- 'It has to have an even number of 10s, like 28 or 88'
- '38'

No mark is awarded for circling 'No' alone.

Do not accept vague or incomplete explanations, eg:

- 'Half of them don't'
- 'Half of 28 is 14'
- 'Double 44 is 88'

If 'Yes' is circled but a correct, unambiguous explanation is given, then award the mark.

U1

[1]

13

(a) Indicates 7531

1

(b) Indicates that all the cards are odd, eg:

- You need to end in an even number.
- There isnt an even card.
- None of them are in the 2 times table.
- You cannot make an even number out of odd cards.
- There must be an even number card.

Accept 'uneven' as a term for 'odd'

eg:

- 'They are all uneven numbers.'

Do not accept explanations which imply that all of the cards must be even eg:

- 'You cannot make an even number if you have an odd card.'
- 'They are not even numbers.'
- 'Most of them are odd.'
- 'They must be even number cards.'

1

- (c) Indicates 51 1
- Indicates 57 1
- (d) Indicates 3751 1
- Indicates 1537 1
- Indicates 1573 1

[7]

14 11 quarters

[1]

15 (a) 14

1

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

Accept equivalent fractions eg $\frac{7}{21}$.

Ignore subsequent work if $\frac{7}{21}$ is simplified incorrectly.

Accept follow through in part (b) of $\frac{7}{a+7}$.

1

[2]

16 (a) 0.7

Accept equivalent fractions.

1

(b) Answer in the range 0.3 to 0.35 exclusive

Accept fractions, eg $\frac{1}{3}$

Do not accept 0.3 OR 0.35

1

*If the answer to (a) is in the range 0.3 to 0.35 exclusive **AND** the answer to (b) is 0.7, then award **ONE** mark for (b).*

[2]

17

$$\left(\boxed{1\frac{1}{2}} + \boxed{3\frac{1}{2}} \right) \times \boxed{2}$$

OR

$$\left(\boxed{\frac{1}{2}} + \boxed{3\frac{1}{2}} \right) \times \boxed{2\frac{1}{2}}$$

Numbers in brackets may be given in either order.

Accept equivalent fractions or decimals.

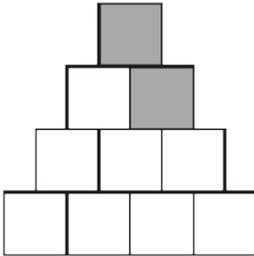
Do not accept use of the same card twice, eg

$$\left(\boxed{2\frac{1}{2}} + \boxed{2\frac{1}{2}} \right) \times \boxed{2}$$

[1]

18

Any two squares shaded, eg



Accept part shapes shaded provided the intention is clear.

Accept inaccuracies in shading provided the intention is clear.

[1]

19

$$\frac{5}{9}$$

Accept equivalent fractions.

[1]

20

22.11

[1]

21

271.8

[1]

22

459

[1]

23

650

[1]

24

Award **TWO** marks for the correct answer of B **AND** C

If the answer is incorrect, award **ONE** mark for:

- B only

OR

- C only

Letters may be given in either order.

Up to 2m

[2]

25

(a) 100 seconds

Answer must be in seconds.

Do not accept 1 minute 40 seconds.

1

(b) 260 cm **OR** 2.6 m

*Accept 260 **OR** 2.6 **OR** 2 m 60 cm.*

1

[2]

26

Lengths written in correct order as shown:

25mm	3.5cm	20cm	$\frac{1}{2}$ m
------	-------	------	-----------------

*Accept use of equivalent units, eg
2.5cm*

Accept answers with missing or incorrect units.

[1]

27

Masses in order, as shown:

$\frac{1}{2}$ kg	800g	2kg	1 tonne
------------------	------	-----	---------

Accept answers with missing or incorrect units.

[1]

28

1.50 **OR** 1.5

Accept $1\frac{1}{2}$ m

Accept 150cm

Do not accept 150m

[1]

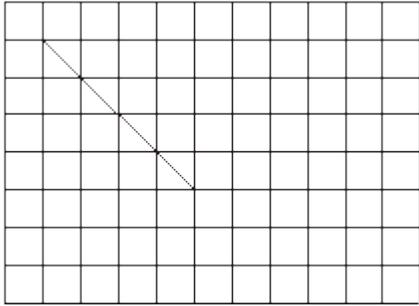
29

700

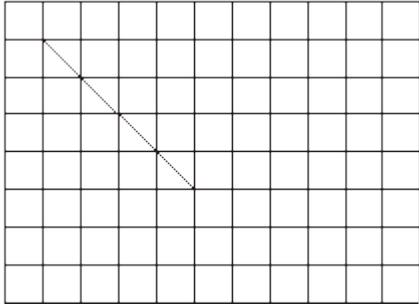
[1]

30

Any rectangle with an area of 8 squares, eg



OR

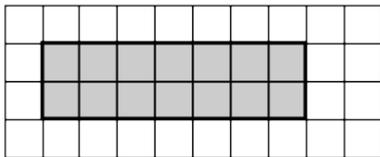


Accept slight inaccuracies in drawing provided the intention is clear.

[1]

31

Any rectangle with an area of 14 squares, eg



*Rectangle need not be shaded or coincident with the grid lines.
Accept extensions to the grid to allow, for example, a 14 x 1 rectangle.*

Accept slight inaccuracies in drawing provided the intention is clear.

[1]

32

(a) 4 km

1

(b) 4:15 pm

The answer is a specific time

1

[2]

33

(a) £3.00

1

(b) 6

1

(c) 10:20 am

The answer is a specific time.

1

[3]

34

(a) 19

1

(b) 14

1

[2]