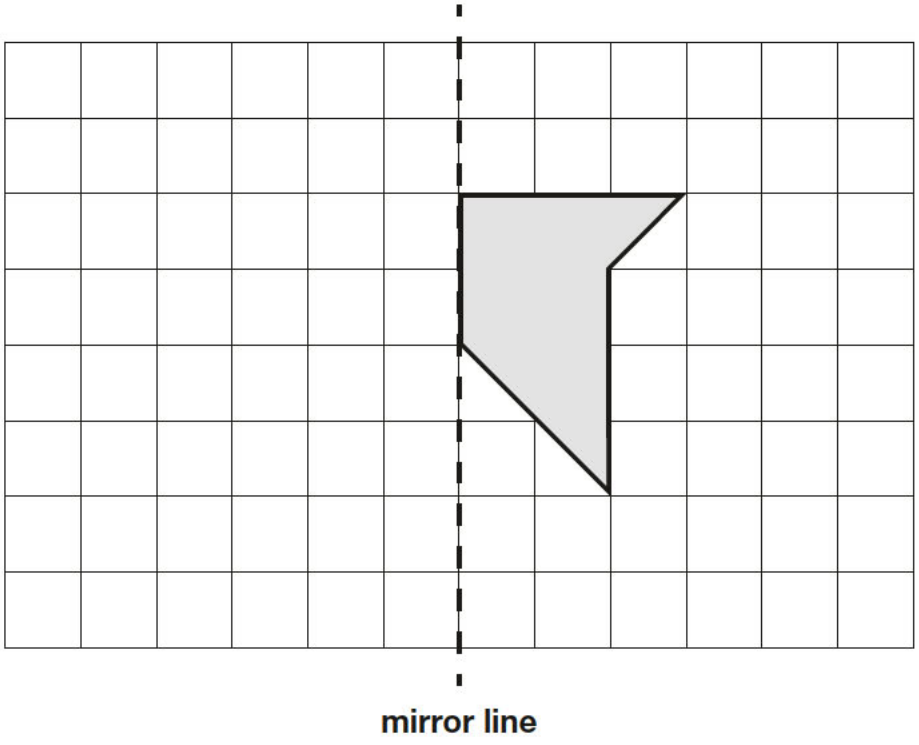
1 Here is a shape on a grid.

Complete the design so that it is symmetrical about the mirror line.

Use a ruler.



1 mark

2 Stefan completes this calculation.

$$\begin{array}{r} 95 \\ -\ 67 \\ \hline 28 \end{array}$$

Write an **addition** calculation he could use to check his answer.

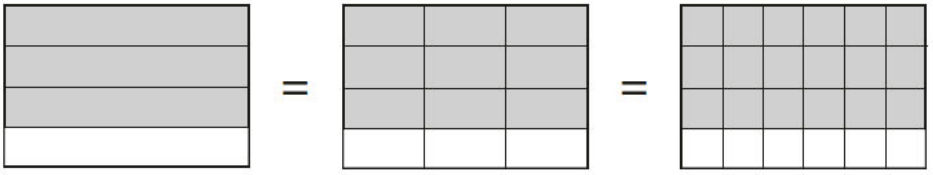
$$\begin{array}{r} \square\square \\ +\ \square\square \\ \hline \square\square \end{array}$$

1 mark

3 On the line below, mark the point that is 6.7 centimetres from A.

1 mark

4 These diagrams show three equivalent fractions.



Write the missing values.

$$\frac{3}{4} = \frac{9}{\square} = \frac{\square}{24}$$

1 mark

5 Here are the temperatures in four cities at midnight and at midday.

	Temperature	
City	**At midnight**	**At midday**
Paris	–4°C	–2°C
Oslo	–13°C	–7°C
Rome	3°C	10°C
Warsaw	–6°C	2°C

At **midnight**, how many degrees colder was Paris than Rome?

degrees

1 mark

Which city was 6 degrees colder at midnight than at midday?

_____

1 mark

6 The numbers in this sequence **decrease** by the same amount each time.

303,604 302,604 301,604 300,604 ...

What is the next number in the sequence?

1 mark

7 Tick the **two** numbers that are equivalent to $\frac{1}{4}$

Tick **two**.

0.25 ☐

0.75 ☐

$\frac{25}{100}$ ☐

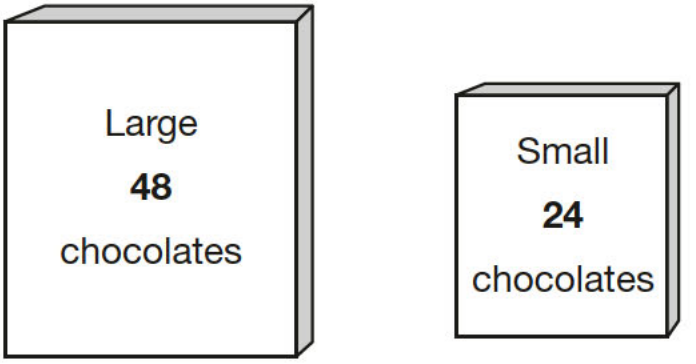
0.5 ☐

$\frac{2}{5}$ ☐

1 mark

8 Ken buys 3 large boxes and 2 small boxes of chocolates.

Each large box has 48 chocolates. Each small box has 24 chocolates.



How many **chocolates** did Ken buy altogether?

Show your method

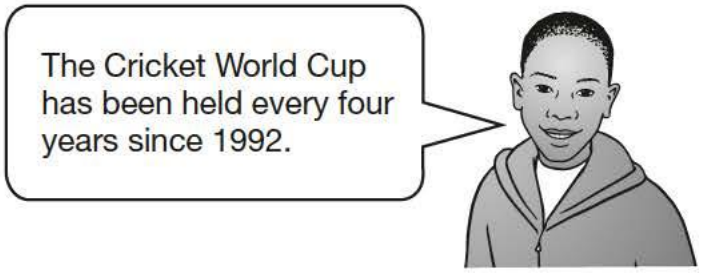
chocolates

2 marks

9 The list below shows the years in which the Cricket World Cup was held since 1992:

1992, 1996, 1999, 2003, 2007, 2011, 2015

Adam says,



Adam is **not** correct.

Explain how you know.

1 mark

10

>	=	<

Write the correct symbol in each box to make the statements correct.

11×12 ☐ 15×10

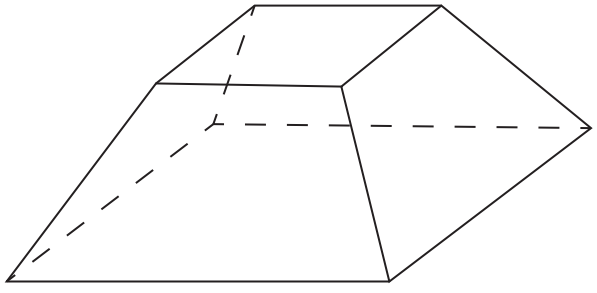
$90 \div 30$ ☐ $60 \div 20$

$120 \div 4$ ☐ $160 \div 8$

30×8 ☐ 100×10

2 marks

11 Here is a drawing of a 3-D shape.



Complete the table.

Number of faces	Number of vertices	Number of edges

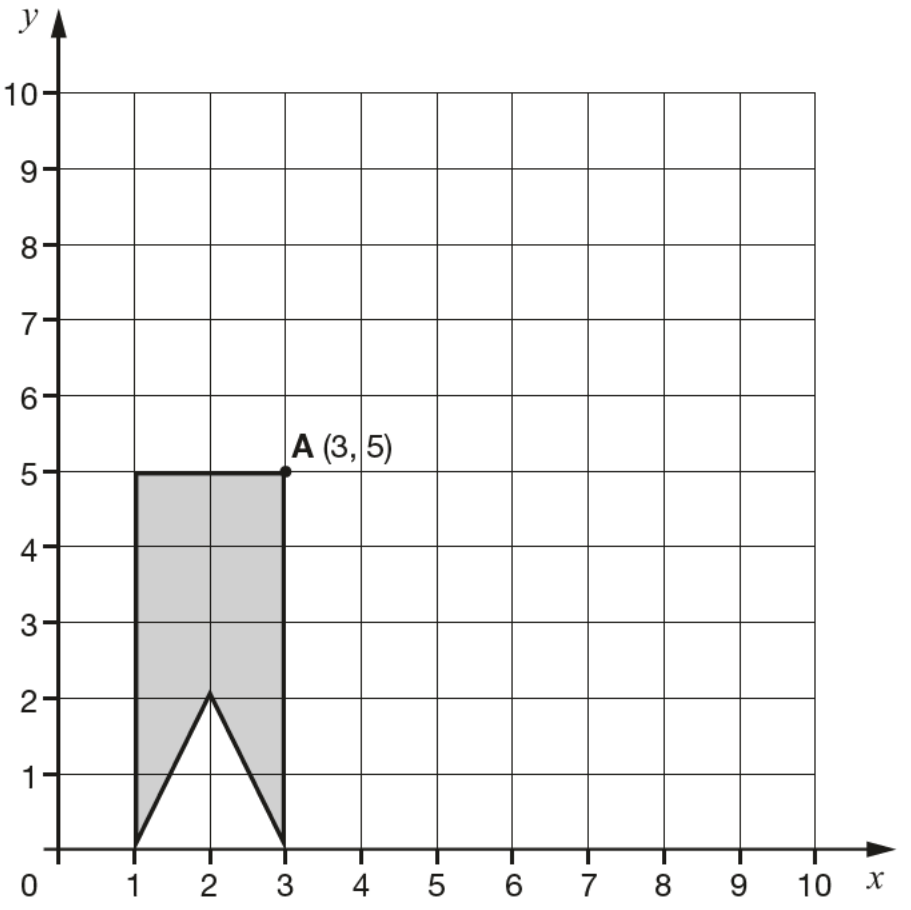
2 marks

12 Here is a shape on a grid.

The shape is translated so that point **A** moves to (7, 8).

Draw the shape in its new position.

Use a ruler.



1 mark

13 Circle the improper fraction that is equivalent to $6\frac{7}{8}$

$\frac{67}{8}$ $\frac{48}{8}$ $\frac{62}{8}$ $\frac{55}{8}$ $\frac{76}{8}$

1 mark

14 $\frac{6}{5}$ $\frac{3}{5}$ $\frac{3}{4}$

Write these fractions in order, starting with the **smallest**.

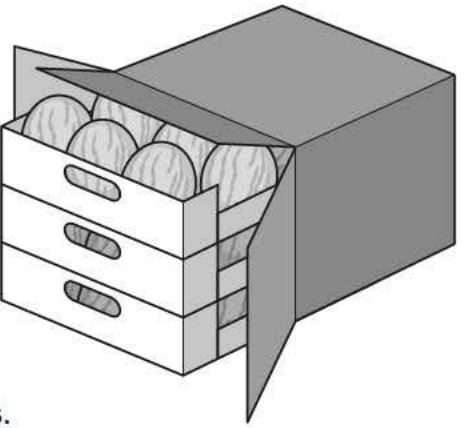
smallest		

1 mark

15 A box contains trays of melons.

There are 15 melons in a tray.

There are 3 trays in a box.



A supermarket sells **40** boxes of melons.

How many melons does the supermarket sell?

Show your method

melons

2 marks

16 Adam wants to use a mental method to calculate 182 – 97

He starts from 182

Here are some methods that Adam could use.

Tick the methods that are **correct**.

add 3 then subtract 90 ☐

subtract 100 then add 3 ☐

subtract 7 then subtract 90 ☐

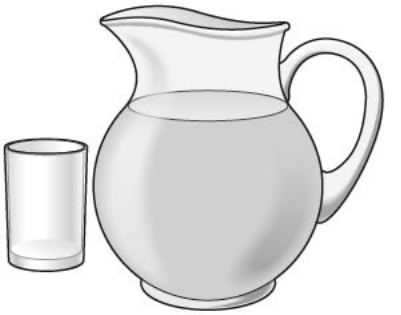
subtract 3 then subtract 100 ☐

2 marks

17 There are 28 pupils in a class.

The teacher has 8 litres of orange juice.

She pours 225 millilitres of orange juice for every pupil.



How much orange juice is left over?

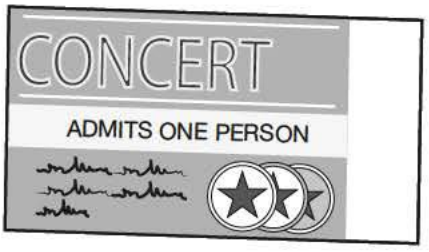
Show your method

3 marks

18 Last year, Jacob went to four concerts.

Three of his tickets cost £5 each.

The other ticket cost £7



What was the **mean** cost of the tickets?

Show your method

£

2 marks

19 Layla wants to estimate the answer to this calculation.

$$3\frac{9}{10} - 2\frac{1}{8} + 1\frac{4}{5}$$

Tick the calculation below that is the best estimate.

Tick **one**.

3 – 2 + 2 ☐

4 – 2 + 1 ☐

4 – 2 + 2 ☐

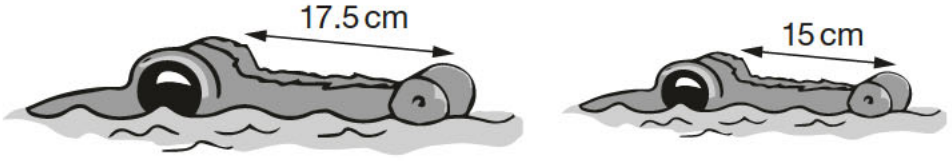
3 – 2 + 1 ☐

1 mark

20 The length of an alligator can be estimated by:

- measuring the distance from its eyes to its nose
- then multiplying that distance by 12

What is the **difference** in the estimated lengths of these two alligators?



Not to scale

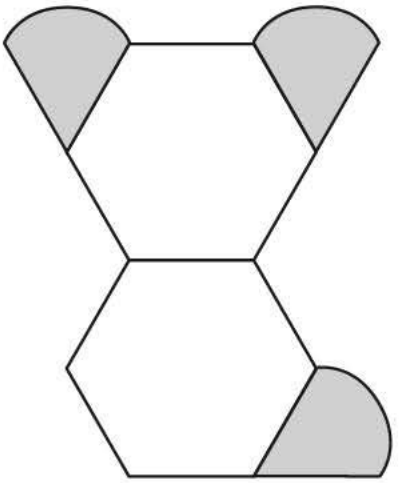
Show your method

cm

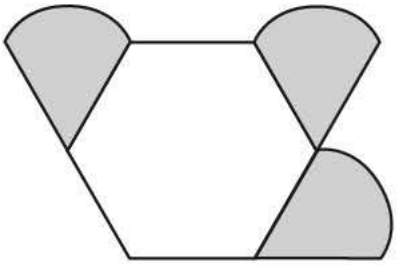
2 marks

21 Amina is making designs with two different shapes.

She gives each shape a value.

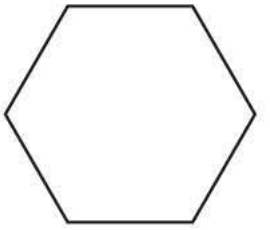


Total value is 147



Total value is 111

Calculate the value of each shape.

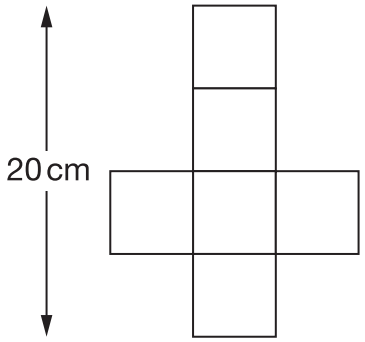
 = ☐

1 mark

 = ☐

1 mark

22 This is the net of a cube.



Not actual size

What is the **volume** of the cube?

$\square$ **cm**^{3}

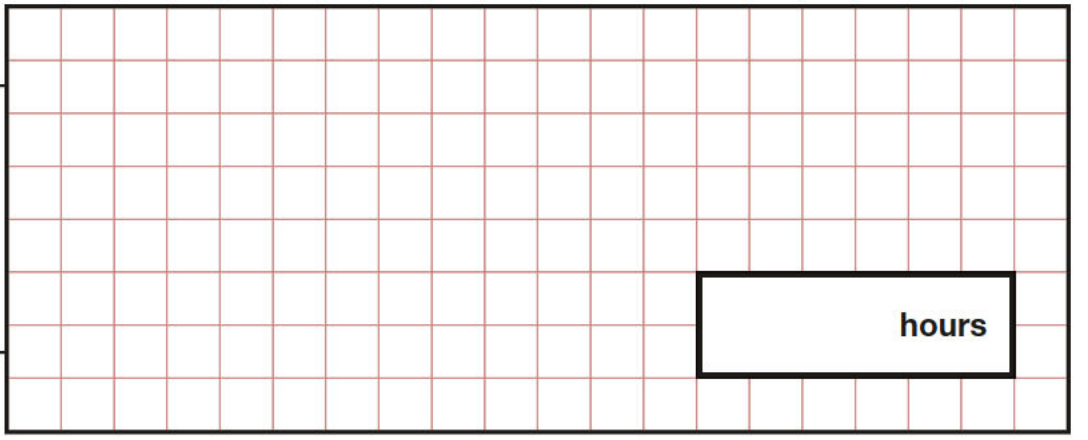
1 mark

23 The length of a day on Earth is 24 hours.

The length of a day on Mercury is $58\frac{2}{3}$ times the length of a day on Earth.

What is the length of a day on Mercury, in **hours**?

Show your method



2 marks