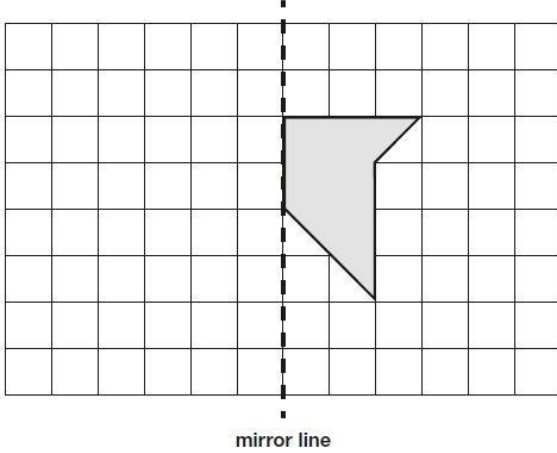


**2018 Paper 2 Question 1**

Here is a shape on a grid. Complete the design so that it is symmetrical about the mirror line.

**2018 Paper 2 Question 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.

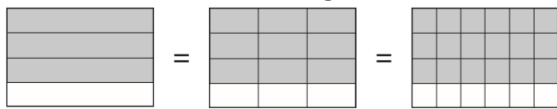
$$\begin{array}{r} \square \square \\ + \square \square \\ \hline \square \square \end{array}$$

**2018 Paper 2 Question 3**

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

**2018 Paper 2 Question 4**

These diagrams show three equivalent fractions. Write the missing values.



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

**2018 Paper 2 Question 7**

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

0.25 0.75 $\frac{25}{100}$ 0.5 $\frac{2}{5}$

**2018 Paper 2 Question 5**

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

City	Temperature	
	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?

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

**2018 Paper 2 Question 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?

**2018 Paper 2 Question 9**

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

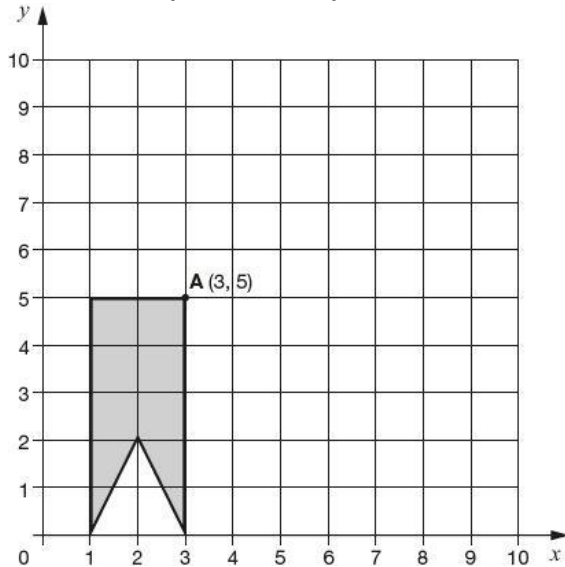
1992, 1996, 1999, 2003, 2007, 2011, 2015

Adam says, 'The Cricket World Cup has been held every four years since 1992.'

Adam is not correct. Explain how you know.

2018 Paper 2 Question 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.

**2018 Paper 2 Question 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

2018 Paper 2 Question 11

Here is a drawing of a 3-D shape. Complete the table.

Number of faces	Number of vertices	Number of edges

2018 Paper 2 Question 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

2018 Paper 2 Question 13

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

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

2018 Paper 2 Question 14

Write these fractions in order, starting with the smallest.

smallest

2018 Paper 2 Question 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?

2018 Paper 2 Question 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?

2018 Paper 2 Question 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?

2018 Paper 2 Question 19

Layla wants to estimate the answer to this calculation.

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

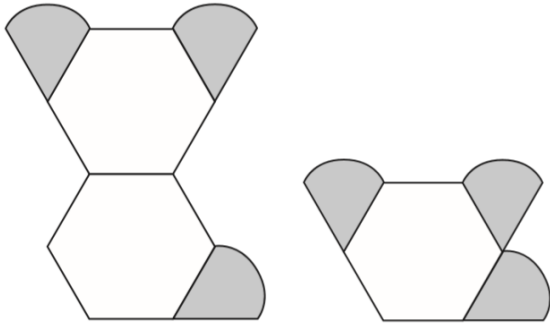
Tick the calculation below that is the best estimate.

$3 - 2 + 2$ $4 - 2 + 1$
 $4 - 2 + 2$ $3 - 2 + 1$



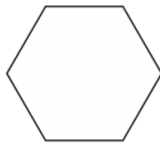
2018 Paper 2 Question 21


Amina is making designs with two different shapes.
She gives each shape a value.
Calculate the value of each shape.



Total value is 147

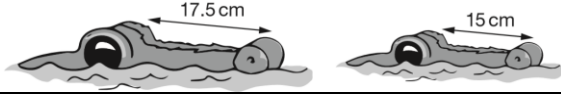
Total value is 111

 =

 =

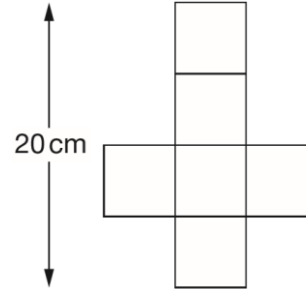
2018 Paper 2 Question 20

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?



2018 Paper 2 Question 22

This is the net of a cube.



What is the volume of the cube?

2018 Paper 2 Question 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?

2018 Paper 3 Question 1

The numbers in this sequence increase by the same amount each time. Write the missing numbers.



2018 Paper 3 Question 5

Tick the numbers that are common factors of both 12 and 18

- 2 3 6 9 12

2018 Paper 3 Question 2

Adam chooses the colours for a new team shirt.
The shirt has two colours.
There are four colours to choose from: yellow, blue, white and red.

Write the two missing combinations.

The shirt could be:

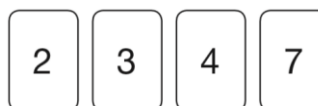
- yellow and blue
- yellow and white
- yellow and red
- blue and white.

_____ and _____

_____ and _____

2018 Paper 3 Question 3

Here are four number cards.



Layla uses each card once to make a four-digit number. She places:

- 4 in the tens column
- 2 so that it has a higher value than any of the other digits
- the remaining two digits so that 7 has the higher value.

Write a digit in each box to show Layla's number.



2018 Paper 3 Question 4

Write the three missing digits to make this addition correct.

$$\begin{array}{r}
 \boxed{5} \ \boxed{3} \ \boxed{2} \ \boxed{} \ \boxed{9} \\
 + \quad \boxed{7} \ \boxed{4} \ \boxed{2} \ \boxed{} \\
 \hline
 \boxed{} \ \boxed{0} \ \boxed{6} \ \boxed{7} \ \boxed{6}
 \end{array}$$

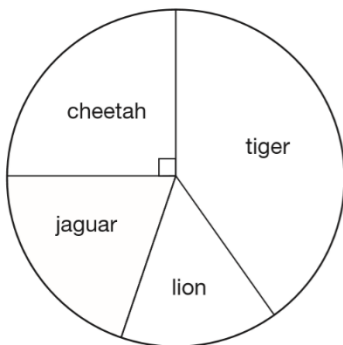
2018 Paper 3 Question 7

A farmer is packing eggs.
Each box holds six eggs.
The farmer has 980 eggs to pack.
How many boxes can the farmer fill using 980 eggs?

_____ full boxes

How many eggs will be left over?

_____ left over

2018 Paper 3 Question 6

This chart shows the number of different types of big cat in a zoo.
There are 20 big cats in the zoo altogether.

Here are some statements about the chart.
Tick the statements that are true.

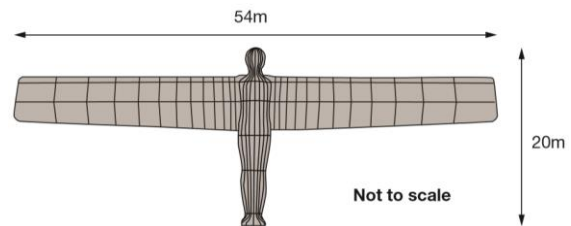
- There are more cheetahs than jaguars.
- The total number of lions and tigers is 10.
- One-quarter of the big cats are cheetahs.
- There are more than 5 jaguars.

2018 Paper 3 Question 8

Jack has £400
He spends 35% of his money on a new bike.
How much does Jack spend on his new bike?

2018 Paper 3 Question 9

The Angel of the North is a large statue in England.
It is 20 metres tall and 54 metres wide.



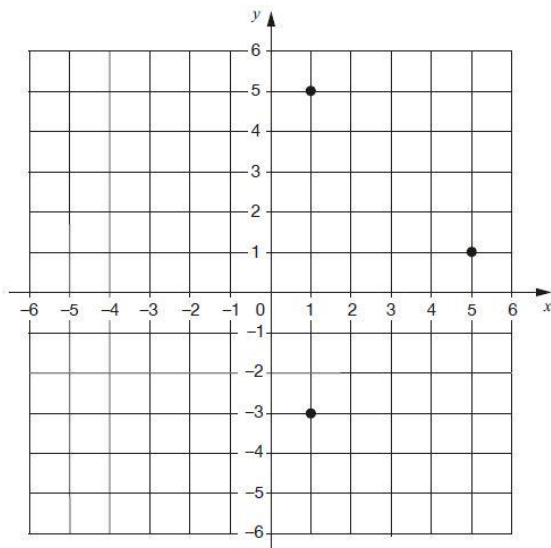
Ally makes a scale model of the Angel of the North.

Her model is 40 centimetres tall.
How wide is her model?

_____ cm

2018 Paper 3 Question 10

Layla draws a square on this coordinate grid.
Three of the vertices are marked.
What are the coordinates of the missing vertex?

**2018 Paper 3 Question 15**

A shop prints designs on T-shirts.
They use this formula to work out the price for printing a design.

$$\text{price} = 60\text{p} \times \text{number of colours} + \text{£}1.25$$

What is the price for printing a design that has 3 colours in it?

Amina has £5 to spend on printing a design.
What is the greatest number of colours she can have in the design?

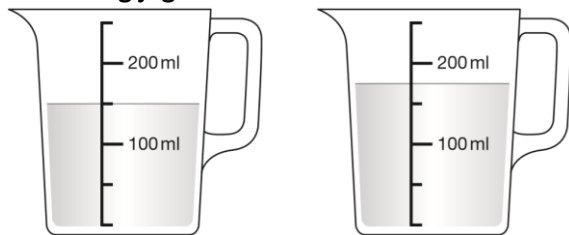
2018 Paper 3 Question 14

Two of the angles in a triangle are 70° and 40° .
Jack says, 'The triangle is equilateral.'
Explain why Jack is not correct.



**2018 Paper 3 Question 11**

Stefan has 600 millilitres of water in a bottle. He pours some of the water into two measuring jugs as shown.



How many millilitres of water are left in Stefan's bottle?

2018 Paper 3 Question 12

This table shows the areas of the United Kingdom and Jamaica.

Country	Area (square kilometres)
United Kingdom	240,000
Jamaica	10,000

The area of the United Kingdom is larger than the area of Jamaica. How many times larger is the United Kingdom?

**2018 Paper 3 Question 13**

A box contains 2.6 kg of washing powder. Jack uses 65 grams of powder for each wash. He uses all the powder. How many washes did Jack do?

2018 Paper 3 Question 16

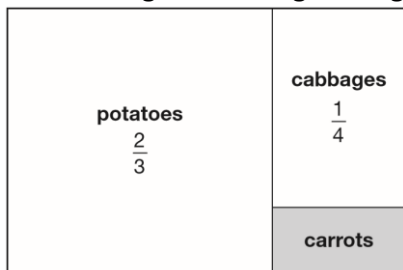
A book has 276 pages.

Amina has read $\frac{1}{3}$ of the book.

How many pages are left for Amina to read?

**2018 Paper 3 Question 18**

This is a diagram of a vegetable garden.



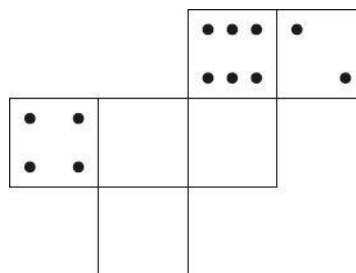
It shows the fractions of the garden planted with potatoes and cabbages. The remaining area is planted with carrots. What fraction of the garden is planted with carrots?

2018 Paper 3 Question 17

On a dice, the sum of the dots on opposite faces is always 7.

Draw dots on the three empty faces of the net so that it could

fold up to make a dice.

**2018 Paper 3 Question 19**

$$33,630 = 354 \times 95$$

Use this multiplication to complete the calculations below.

$$354 \times 9.5 =$$

$$3,540 \times 95 =$$

$$3,363 \div 95 =$$

2018 Paper 3 Question 20

In March, Ken collects 2, 3 or 4 eggs each day from his hens.

In the first 20 days, Ken collects 57 eggs altogether.

There are 31 days in March.

What is the greatest number of eggs Ken can collect in March?

**2018 Paper 3 Question 21**

Jack finished a sponsored run in 53 minutes 25 seconds.

Ally finished 3 minutes 50 seconds after Jack. How long did Ally take?

Layla finished the run 8 minutes 45 seconds before Jack.

How long did Layla take?