1st Class Maths

Video Solutions

SCAN ME

PRACTICE PAPER FOR

AQA Paper 1H
(June 2025)

Disclaimer

This paper has been created based on some of the common paper 1 topics from previous years. The paper should be excellent at helping students revise for exams, however it should not be relied upon as the basis for revision. The topics from this paper may well appear in the real exams, however there is absolutely no guarantee of this. Some topics may appear, some may not. Despite what you might see on social media it is not possible to "predict" the paper. This is usually what people say when they are selling you something…

The best way to prepare for the exams is to **revise all topics**.

You can find a link to this paper and more completely free resources at www.1stclassmaths.com

Answer **all** questions in the spaces provided.

1   A is 5% greater than B.

Write a number to complete the equation below.   **[1 mark]**

$$A = \underline{\hspace{2cm}} \times B$$

2   Work out $8 \div \dfrac{2}{3}$ **[2 marks]**

Answer _____

3   A straight line has the equation $y = 4x - 8$

3 (a)   Write down the coordinates of the point where the graph crosses the *y*-axis.
[1 mark]

Answer (_____ , _____)

3 (b)   Write down the coordinates of the point where the graph crosses the *x*-axis.
[1 mark]

Answer (_____ , _____)

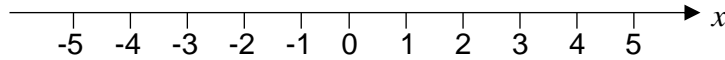*Do not write outside the box*

4 (a)   Solve $2x + 4 > -2$ **[2 marks]**

Answer

4 (b)   Represent your answer to part **(a)** on the number line below.   **[2 marks]**

5   A linear sequence starts

2   2.5   3   3.5   4   …

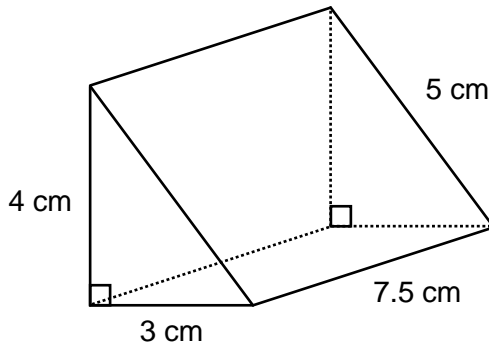Work out an expression for the nth term of the sequence.   **[2 marks]**

Answer

11

Turn over ▶

6   The cross section of a prism is a right-angled triangle.

5 cm

Not drawn accurately

4 cm

7.5 cm

3 cm

Work out the volume of the prism.   **[3 marks]**

Answer _____ cm³

7   The mass of a banana is 120 g correct to the nearest 10 grams.
Complete the error interval for the mass of the banana.

     [2 marks]

_____ g ⩽ mass < _____ g

8   Serena selects four different prime numbers less than 30.

The median of her four prime numbers is 15.

The range of her four prime numbers is 12.

Work out a possible set of prime numbers that Serena could have selected.

[3 marks]

Answer _____ , _____ , _____ , _____

9   Write the following in order of size.
Start with the smallest.

0.3^2 0.5^0 2^{-2} 5^{-1} **[3 marks]**

Smallest _____

_____

_____

Largest _____

11

Turn over ▶

Do not write outside the box

10 Here is a full bottle of drink and an empty cup.

Bottle

Cup

Capacity $2\frac{1}{3}$ litres   Capacity $\frac{1}{4}$ litre

Lydia pours drink from the full bottle to fill 7 empty cups.

Work out how much drink is left in the bottle.   **[3 marks]**

Answer _____ litres

Do not write outside the box

11   Peter, Ray and Winston share some money.

Peter receives 40% of the money.

Ray's money : Winston's money = 1 : 3

Work out   Peter's money : Ray's money : Winston's money

Give your answer in its simplest form.   **[3 marks]**

Answer _____ : _____ : _____

6

Turn over ▶

Do not write outside the box

12 $x = 3.6 \times 10^{-3}$
             $y = 5 \times 10^{2}$

12 (a)   Work out the value of $2x$
             Give your answer as an ordinary number.   **[2 marks]**

             Answer _____

12 (b)   Work out the value of y^{3}
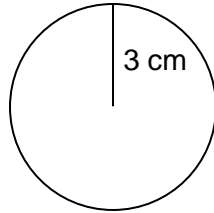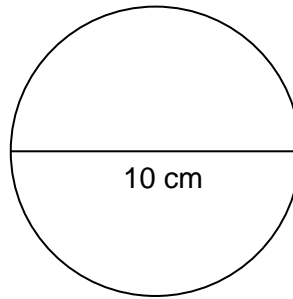   Give your answer in standard form.   **[3 marks]**

             Answer _____

13 The radius of **circle A** = 3 cm
The diameter of **circle B** = 10 cm

3 cm

circle A

10 cm

circle B

Express the area of **circle A** as a percentage of the area of **circle B**. **[3 marks]**

Answer _____ %

8

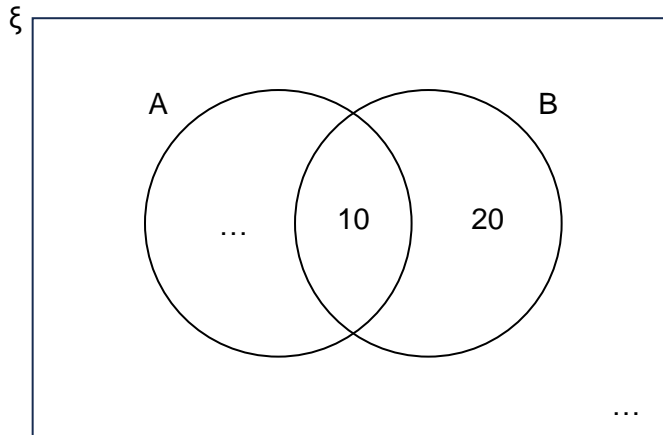**Turn over ▶**

14 The incomplete Venn diagram below represents 50 items.

ξ

A   B

…   10   20

…

For each of the following statements, tick the correct box.   **[4 marks]**

	Must be true	Could be true	Cannot be true
$P(A) = \frac{30}{50}$	☐	☐	☐
$P(B) = \frac{20}{50}$	☐	☐	☐
$P(A \cap B) = \frac{10}{50}$	☐	☐	☐
$P(A \cup B) = \frac{30}{50}$	☐	☐	☐

15 Solve $(3x + 1)(2x - 5) = 0$ **[2 marks]**

Answer _____

16 A circle, centre O, passes through (9, 0)
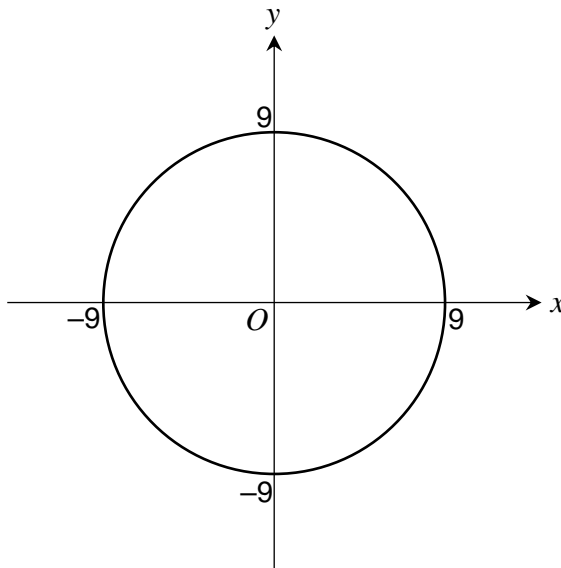
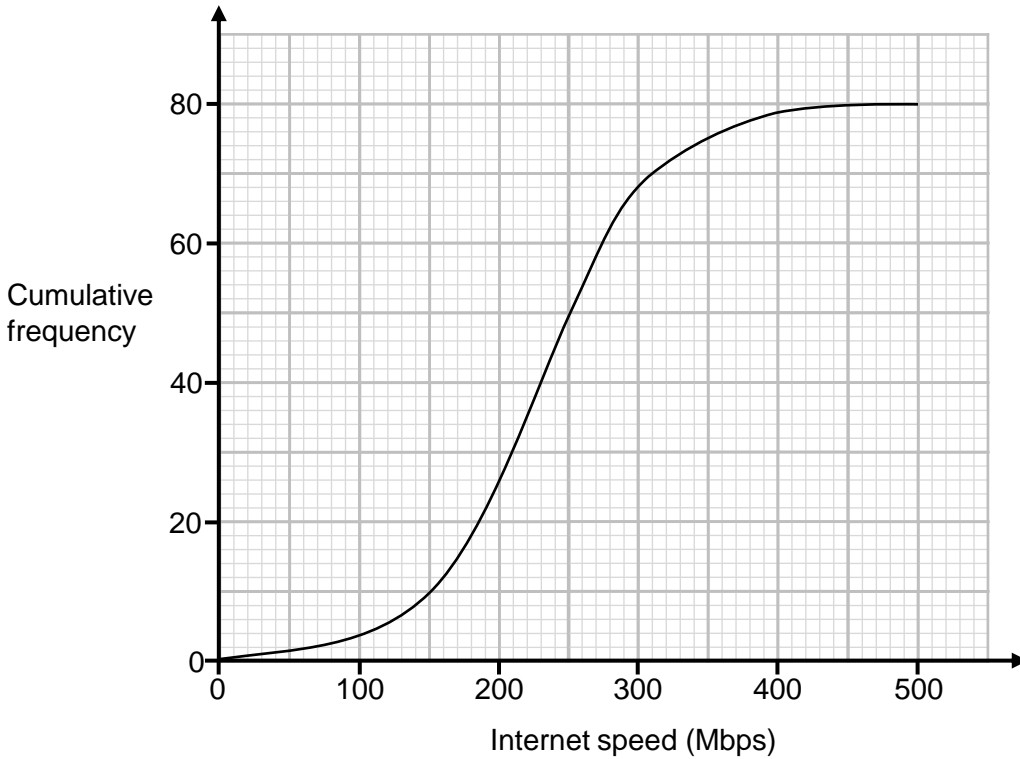Write down the equation of the circle. **[1 mark]**

Answer _____

7

Turn over ▶

17 The cumulative frequency diagram shows information about the internet speeds of a sample of 80 customers from an internet service provider.

17 (a) Use your graph to estimate the median internet speed. **[1 mark]**

Answer _____ Mbps

17 (b) Use your graph to estimate the inter quartile range of the internet speeds. **[2 marks]**
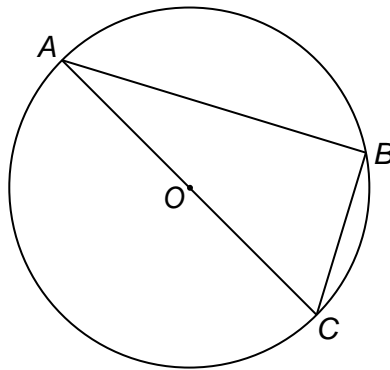
Answer _____ Mbps

17 (c)   Work out the percentage of the customers sampled that have an internet speed over 300 Mbps.

[2 marks]

Answer _____ %

18   *A*, *B,* and *C* are points on a circle, centre *O*.

Write down the size of angle *ABC*.

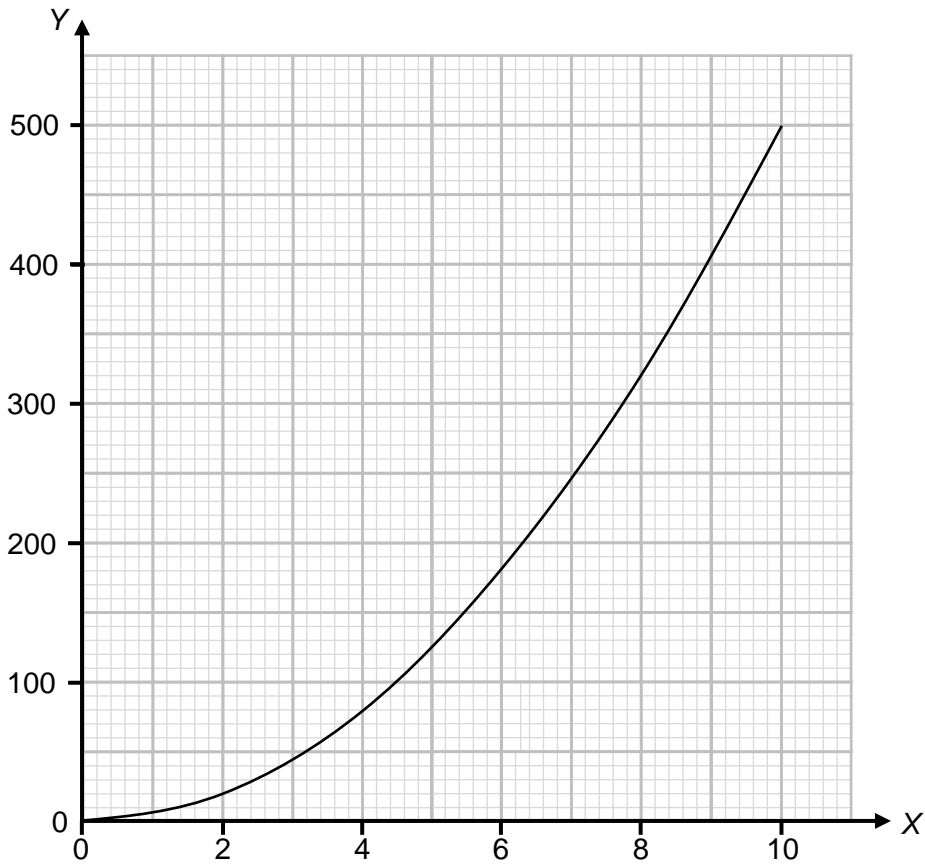**[1 mark]**

Answer _____ degrees

6

Turn over ▶

Do not write outside the box

19 Y is directly proportional to the square of X.
The graph below shows Y plotted against X.

19 (a) Work out an equation connecting Y and X. **[3 marks]**

Answer _____

19 (b)   Work out the value of *Y* when *X* = 20   **[2 marks]**

Answer _____

20
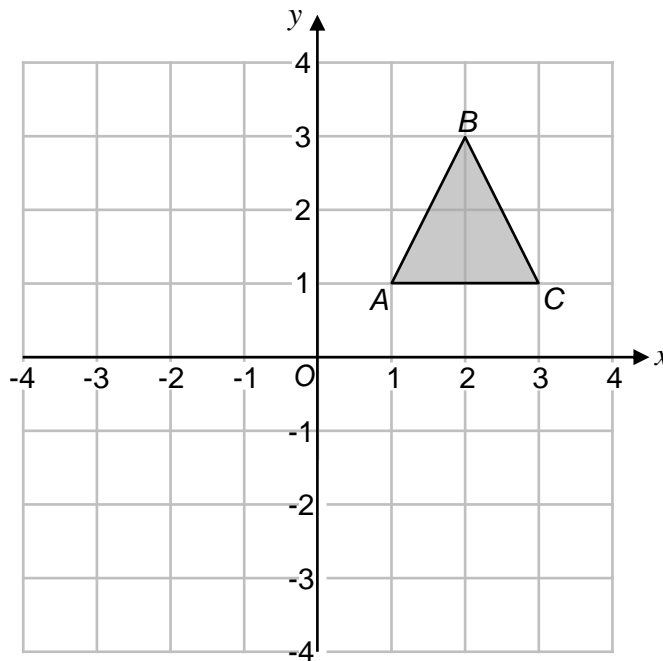
Triangle *ABC* is reflected in the line $x = 1$

How many of the vertices of Triangle *ABC* are invariant?
Circle your answer.

  0   1   2   3

6

Turn over ▶

21 $4^x = \sqrt{2}$ $\left(\dfrac{2}{3}\right)^y = 1.5$

Work out the values of x and y. **[4 marks]**

$x =$ _____ $y =$ _____

22 Convert $0.7\dot{2}$ to a fraction.

Give your answer in its simplest form. **[3 marks]**

Answer _____

23   Here is the graph of $y = \sin x$ for $0° \leqslant x \leqslant 360°$
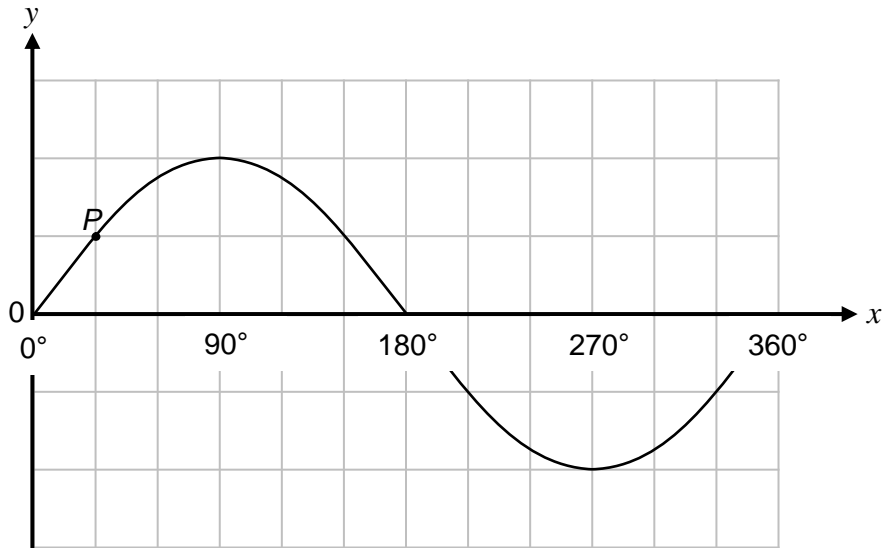
23 (a)   Write down the coordinates of P.   **[1 mark]**

Answer (_____ , _____)

23 (b)   On the grid below the graph of $y = \sin x$ is shown as a dashed line.
          Sketch the graph of $y = \sin (x - 60°)$ for $0° \leqslant x \leqslant 360°$ onto the grid below.

[1 mark]

9

Turn over ▶

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24　　ABC and ADE are straight lines.
　　BD is parallel to CE.

Not drawn accurately

$AD = 4x - 2$
$DE = 10 - 2x$
$BD = 2x + 3$
$CE = x + 9$

Work out the value of x.　　　　　　　　　　　　**[5 marks]**

$x = $ _____

Do not write outside the box

25   f$(x) = x^2 - 2x$ g$(x) = x + 3$

Prove algebraically that fg$(x) \geq -1$ for all values of x.   **[5 marks]**

10

Do not write outside the box

26   *ABC* is a triangle.

Point *D* is on the line *BC*
$AD = \sqrt{6}$ cm

Work out the exact area of triangle *ABC*.
Give your answer in the form $k\sqrt{3}$, where k is an integer.

[6 marks]

Answer _____

END OF QUESTIONS

6