1st Class Maths

Video Solutions

SCAN ME

PRACTICE PAPER FOR

Edexcel Paper 1H (June 2025)

Answer ALL questions

Write your answers in the spaces provided

You must write down all the stages in your working.

1 (a) Write 7.2×10^5 as an ordinary number.

....
(1)

(b) Write 0.0334 in standard form.

....
(1)

(Total for Question 1 is 2 marks)

2 Show that $\quad 2\frac{1}{4} - 1\frac{5}{6} = \frac{5}{12}$

(Total for Question 2 is 3 marks)

2

Video Solutions

3 Eden is asked to express 330 as a product of its prime factors.

Her answer is $5 \times 6 \times 11$

Explain the mistake that Eden has made.

....

....

....

(Total for Question 3 is 1 mark)

4 A shop sells a pair of shoes for £48 and a suit for £300.

The price of the pair of shoes is increased by 25%
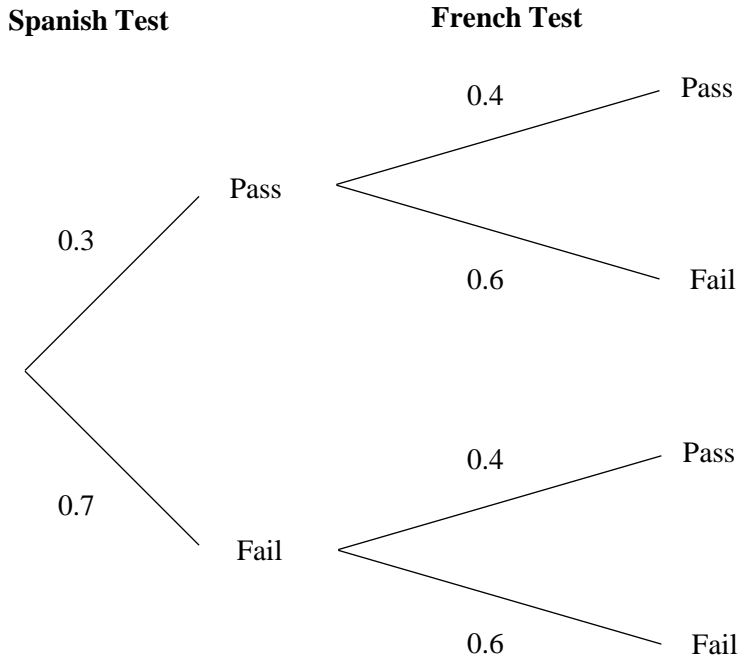The price of the suit is decreased by x%

The price of the pair of shoes is now one third of the price of the suit.

Work out the value of x.

$x = $ ....

(Total for Question 4 is 4 marks)

3

5 Reece takes a Spanish test and a French test.
The tree diagram below shows the probabilities of him passing or failing each of the tests.

Spanish Test   **French Test**

Work out the probability that Reece passes exactly one of his tests.

....

(Total for Question 5 is 3 marks)

6 Work out the value of $2^5 \times 3^{-2}$

Give your answer as a mixed number.

....

(Total for Question 6 is 3 marks)

7 The cross section of a prism is an isosceles triangle with a perpendicular height of 4.8 cm.

5 cm

4.8 cm

2.8 cm

4 cm
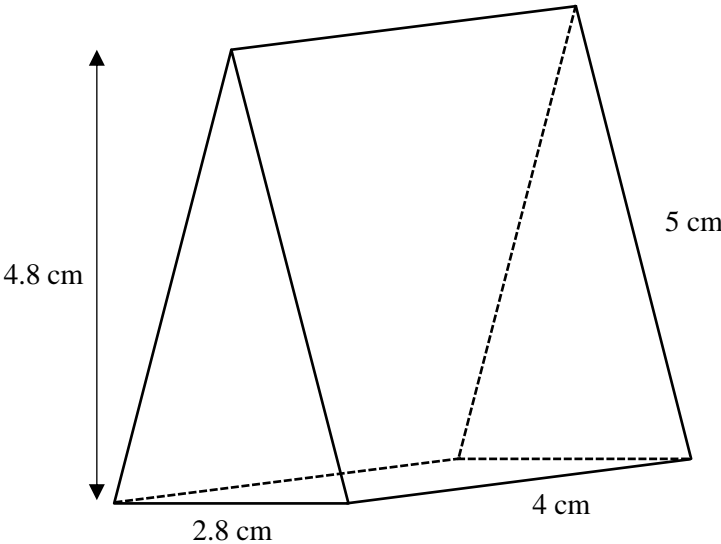
(a) Show that the volume of the prism is less than 27 cm^3

(3)

(b) Work out the total length of all the edges of the triangular prism.

.... cm

(2)

(Total for Question 7 is 5 marks)

5

8 A bag contains 100 counters that are either red or green or blue.

The ratio of the numbers red counters to the number green counters in the bag is 4 : 1
One quarter of the counters are blue.

The mean mass of the red counters is 6 grams
The mean mass of the green counters is 2 grams
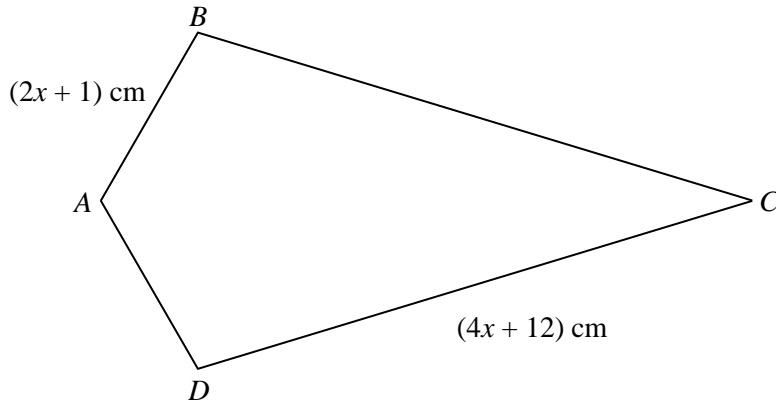The mean mass of the blue counters is 4 grams

Show clearly that the mean mass of all 100 counters is less than 5 grams.

(Total for Question 8 is 5 marks)

9

ABCD is a kite.
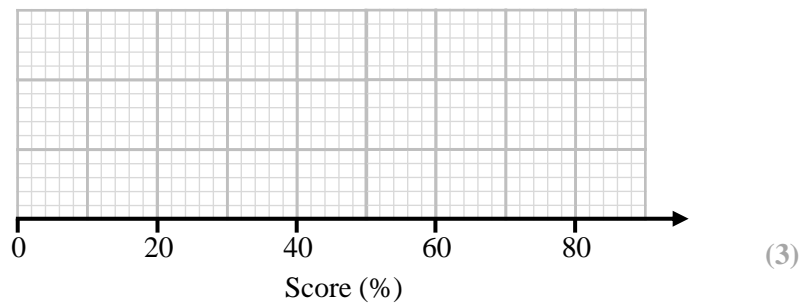*BC* = 3 × *AD*

Work out the perimeter of the kite.

.... cm

(Total for Question 9 is 5 marks)

7

10 The table below shows information about the test scores of 200 students in Year 7.

	Score (%)
Lowest Score	22
Lower Quartile	30
Median	38
Inter Quartile Range	40
Range	60

(a) Draw a box plot to represent this information.

Score (%)

(3)

(b) Estimate the number of Year 7 students who scored less than 30% on the test.

....

(2)

(Total for Question 10 is 5 marks)

11 (a) Expand and simplify $(x + 2)^3$

....

(b) Make x the subject of $\dfrac{\pi}{7 - x} = k$

....

(3)

(Total for Question 11 is 6 marks)

12
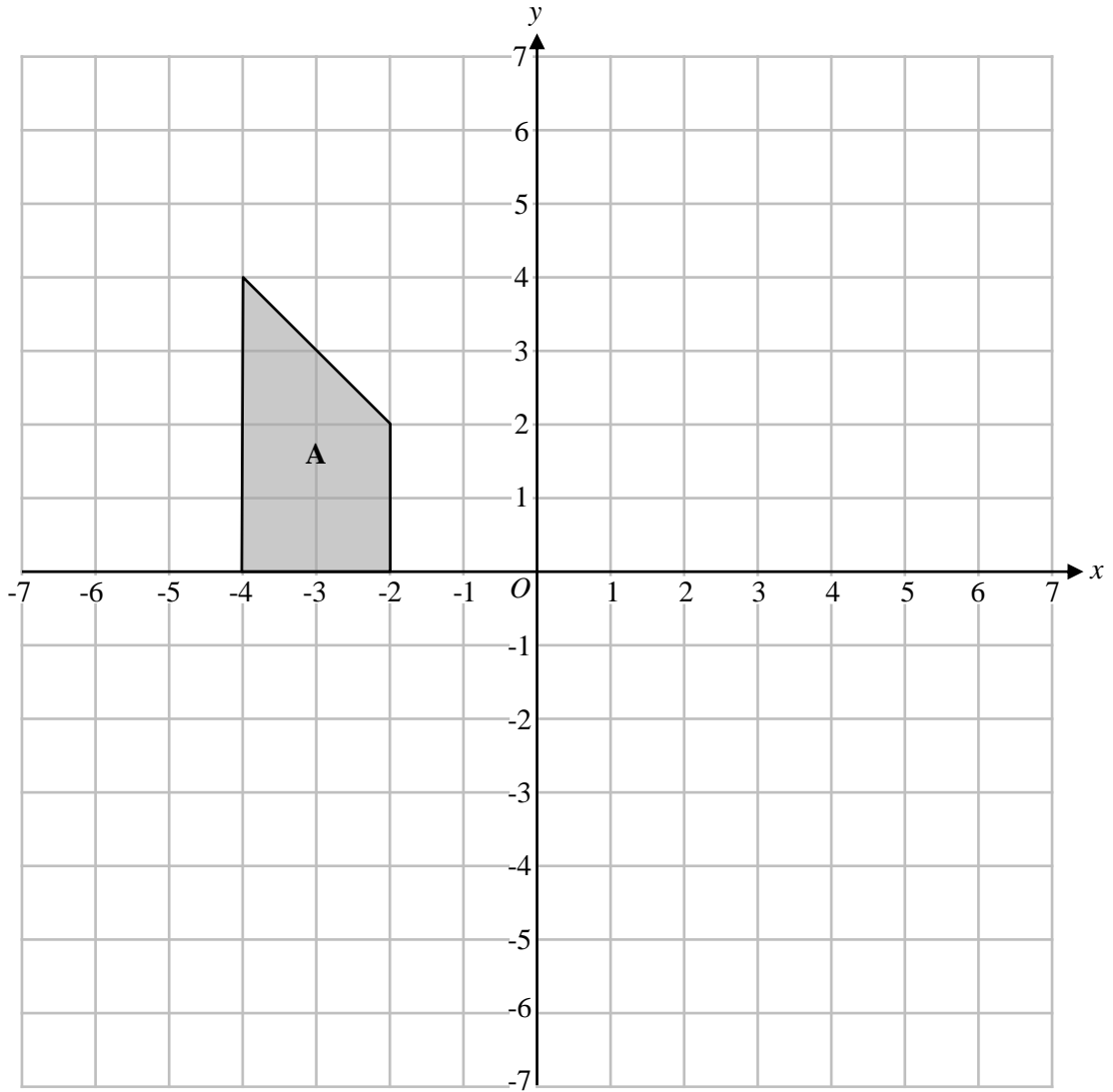
Enlarge shape **A** by scale factor $-\dfrac{3}{2}$, centre (0, 2)

(Total for Question 12 is 2 marks)

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13 A solid shape is made by cutting a cylinder in half.

10 cm

8 cm
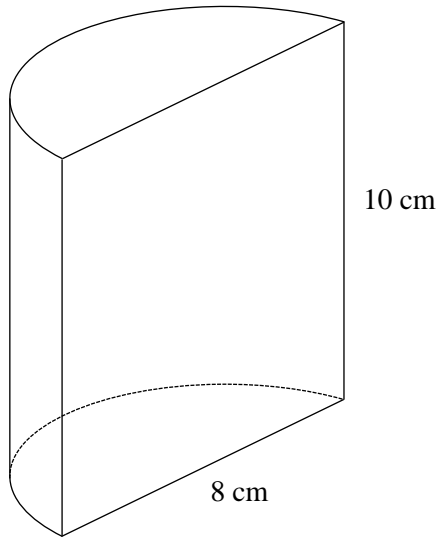
Work out the total surface area of the solid shape.
Give your answer in terms of π.

.... cm^2

(Total for Question 13 is 4 marks)

11

14 Express $0.2\dot{3}$ as a fraction in its simplest form.
You must show all your working.

....

(Total for Question 14 is 3 marks)

15 Y is inversely proportional to X
$Y = 0.4$ when $X = 50$

Work out the value of Y when $X = 20$

....

(Total for Question 15 is 3 marks)

16 $f(x) = 2x + 1$ $g(x) = 5 - x^4$

(a) Find $f^{-1}(x)$

$f^{-1}(x) =$ ....
(2)

(b) Work out the value of $fg(\sqrt{3})$

....
(3)

(Total for Question 16 is 5 marks)

17 Solve $x^2 - 9x + 18 < 0$

....

(Total for Question 17 is 3 marks)

13

Turn over ▶

18 The graph of $y = f(x)$ is shown on the grid below.

$y = f(x)$
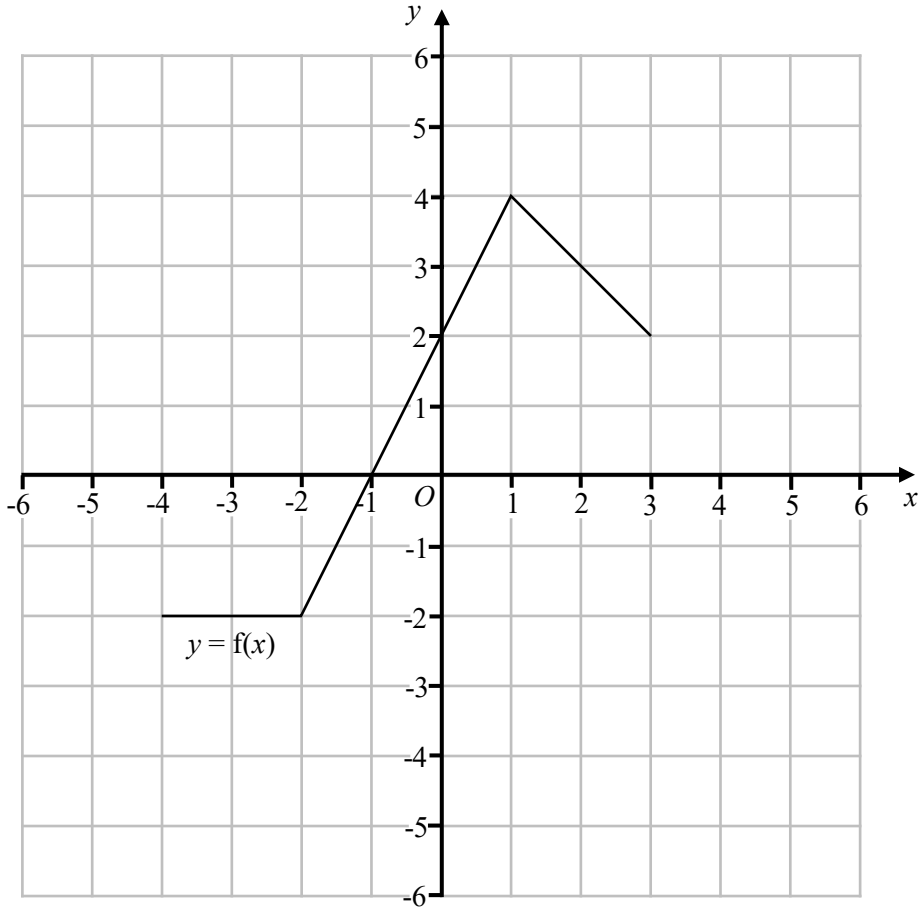
(a) Draw the graph of $y = f(-x)$ onto the grid above. **(1)**

Point $A(1, 4)$ is on the graph $y = f(x)$

When the graph of $y = f(x)$ is transformed to the graph with equation $y = f(x + 1) - 1$ the point A is mapped to point B.
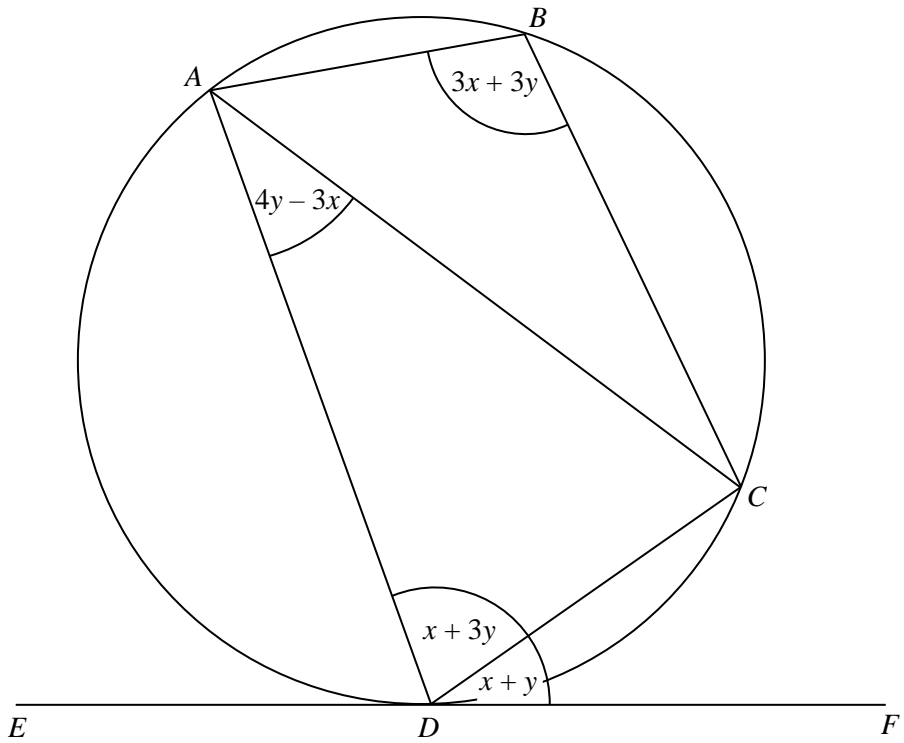
(b) Write down the coordinates of point B.

(..................... , ...)

(2)

(Total for Question 18 is 3 marks)

19 *A*, *B*, *C* and *D* are points on the circumference of a circle.
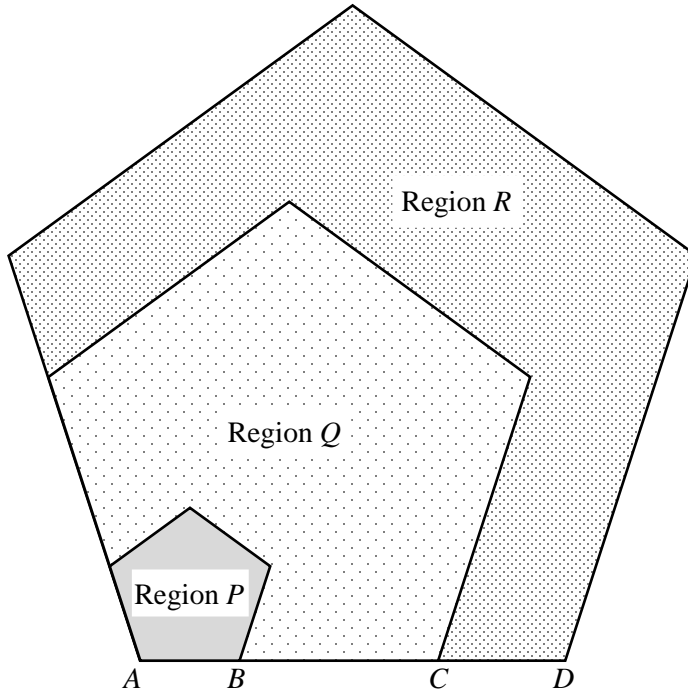 *EF* is the tangent to the circle at point *D*.

Work out the values of *x* and *y*.

x = ...

y = ...

(Total for Question 19 is 5 marks)

20 The diagram shows 3 regular pentagons that each have a vertex at point *A*.
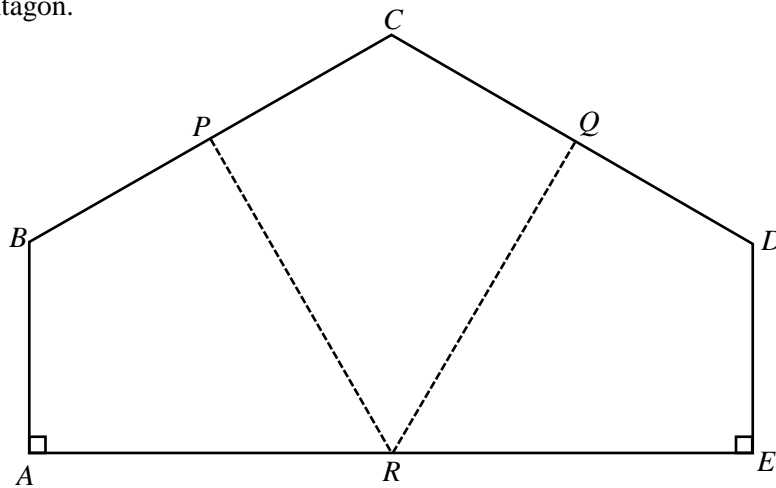

$AB : BC : CD = 1 : 2 : \sqrt{19} - 3$

Work out the ratio of   Area of Region *P* : Area of Region *Q* : Area of Region *R*

....

(Total for Question 20 is 4 marks)

21 *ABCDE* is a pentagon.

Angle *BAR* = angle *DER* = 90°
Lines *PR* and *QR* split the pentagon into three congruent kites.

The area of pentagon *ABCDE* = $75\sqrt{3}$ cm²
Work out the perimeter of pentagon *ABCDE*

Give your answer in the form $a + b\sqrt{3}$ where *a* and *b* are integers.

.... cm

(Total for Question 21 is 6 marks)

TOTAL FOR PAPER IS 80 MARKS