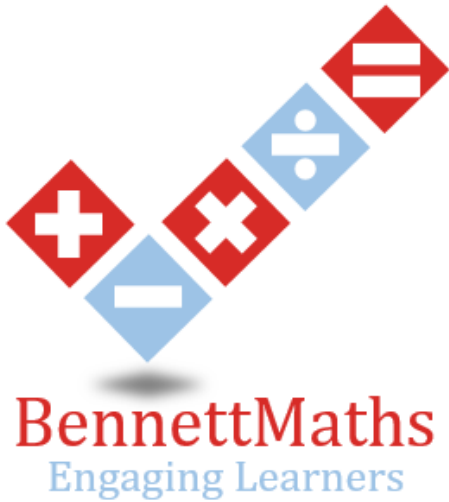


*BennettMaths will be live on TikTok the night before paper 3,
going through all the predicted papers.*

Tuesday 9th June at 8pm

Candidate surname

Other names



Pearson
Edexcel

Best Guess Paper –
3F
Calculator

Within this booklet you will find my best guess at which topics might be on the third Edexcel Foundation gcse maths paper.

There may be other topics that appear on paper 3, so please ensure that you continue to revise all topics.

The paper consists of 29 questions totalling 80 marks.

1 Simplify $3a + 4a + b$

$$7a + b$$

(Total for Question 1 is 1 mark)

2 Write down two factors of 15

1, 15

(Total for Question 2 is 1 mark)

3 Write down the probability of rolling a 4 on a fair 6-sided dice

$$\frac{1}{6}$$

(Total for Question 3 is 1 mark)

4 Write down the value of the 4 in the number 5427

400

(Total for Question 4 is 1 mark)

5 Write down the number of degrees in a right angle

90

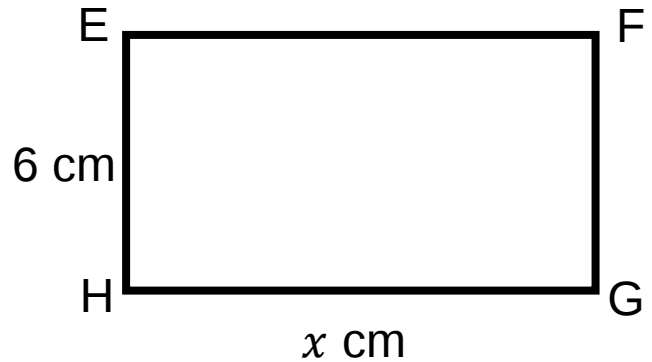
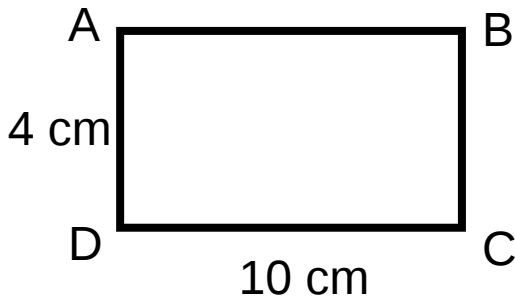
(Total for Question 5 is 1 mark)

6 Write down the name of an angle that is smaller than 90°

acute

(Total for Question 6 is 1 mark)

7 ABCD and EFGH are similar rectangles.



Work out the value of x

$$6 \div 4 = 1.5$$

$$10 \times 1.5 = 15$$

(Total for Question 7 is 2 mark)

8(a) Expand $3(2x - 4)$

$$6x - 12$$

(1)

(b) Solve $2x + 1 = 12$

$$2x = 11$$

$$x = 5.5$$

(2)

(c) Expand and simplify $4(2x + 1) + 3(x - 5)$

$$8x + 4 + 3x - 15$$

$$11x - 11$$

(2)

(d) Solve $\frac{x+4}{3} = 12$

$$x + 4 = 36$$

$$x = 32$$

(2)

(Total for Question 8 is 7 marks)

9 Amy (A), Lilly (L) and Sharon (S) take part in a race.

They will either finish in 1st, 2nd or 3rd place.

List all the possible outcomes for their finishing positions. The first one has been completed for you.

1 st	2 nd	3 rd
A	L	S
A	S	L
L	A	S
L	S	A
S	A	L
S	L	A

(Total for Question 9 is 2 marks)

- 10 Leo and Margot share some money in the ratio 5:3

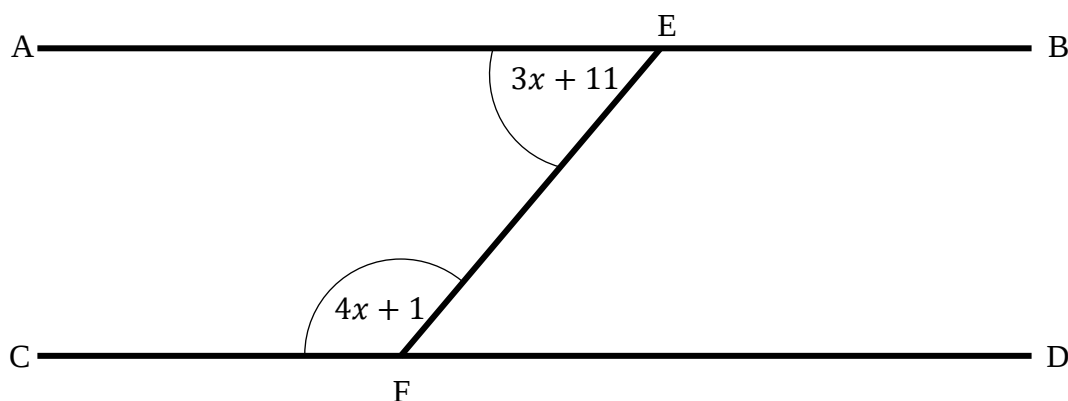
Leo receives £17 more than Margot.

Work out the total amount of money that they share.

$$\begin{aligned} 2 \text{ parts} &= £17 \\ 1 \text{ part} &= £8.50 \\ 8 \text{ parts} &= £68 \end{aligned}$$

(Total for Question 10 is 3 marks)

- 11 AB and CD are a set of parallel lines



$$\text{Angle AEF} = 3x + 11$$

$$\text{Angle CFE} = 4x + 1$$

Work out the size of x

$$3x + 11 + 4x + 1 = 180$$

$$7x + 12 = 180$$

$$7x = 168$$

$$x = 24$$

(Total for Question 11 is 3 marks)

12 Using a calculator, work out the value of

$$\sqrt[3]{\frac{4.3 \times \sin(45)}{9.3^2}}$$

(a) Write down all the numbers on your calculator display

0.3275889
(2)

(b) Round your answer to part (a) to 3 significant figures

0.328
(1)

(Total for Question 12 is 3 marks)

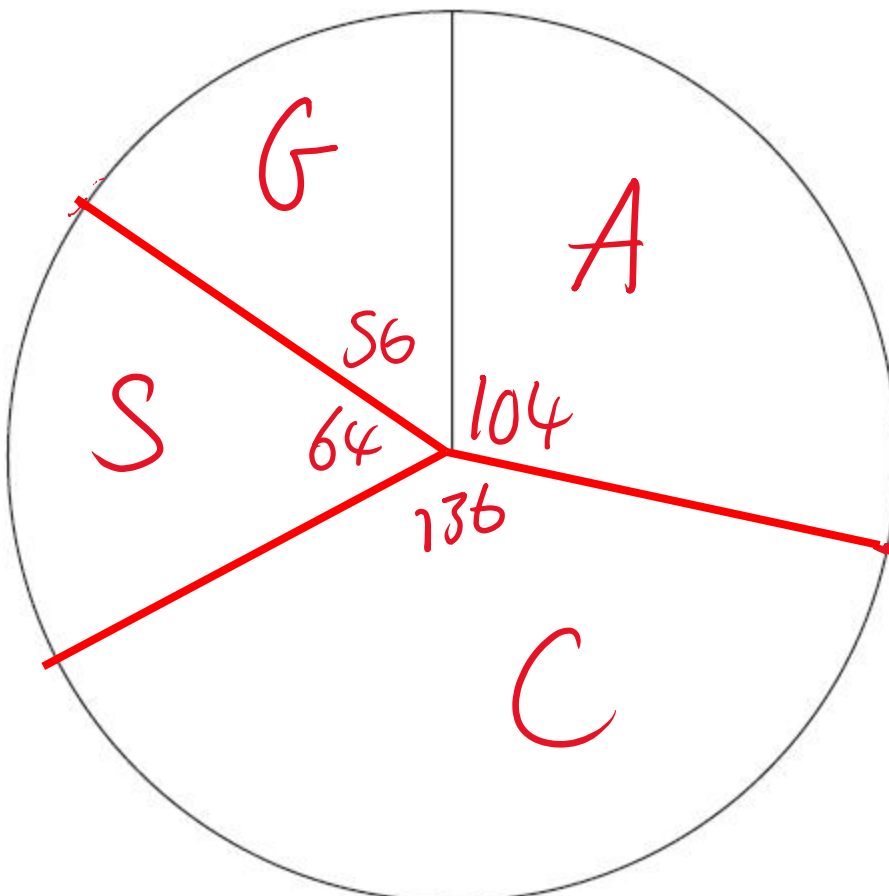
- 13 The frequency table below shows the favourite sport of 45 students

Sport	Frequency
athletics	13
cycling	17
swimming	8
gymnastics	7

$\times 8$ 204
 $\times 8$ 136
 $\times 8$ 64
 $\times 8$ 56

Draw an accurate pie chart to represent this information

$$360 \div 45 = 8$$



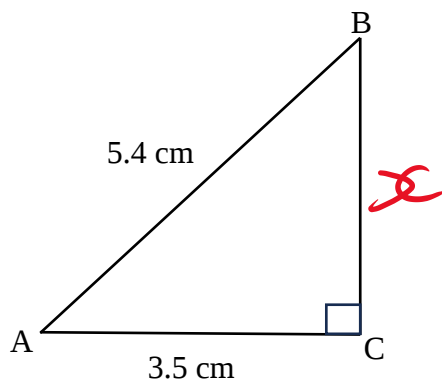
- 14 The two-way table shows the number of pupils in year 11 and their favourite core subject.

	Maths	English	Science	Total
Boys	138	21	67	226
Girls	112	63	13	188
Total	250	84	80	414

Complete the two-way table

(Total for Question 14 is 3 marks)

- 15 The right-angled triangle ABC has been drawn below.
AB = 5.4 cm
AC = 3.5 cm



Work out the length of BC.

Give your answer correct to 2 decimal places.

$$5.4^2 - 3.5^2 = x^2$$

$$29.16 - 12.25 = 16.91$$

$$x^2 = 16.91$$

$$x = 4.11$$

(Total for Question 15 is 3 marks)

16

Leo is 4 years older than Margot
Nigel is twice as old as Leo

The average of their ages is 24.

Work out how old Leo is.

$$M = x$$

$$L = x + 4$$

$$N = 2x + 8$$

$$\frac{4x + 12}{4} = 24$$

$$4x + 12 = 96$$

$$4x = 84$$

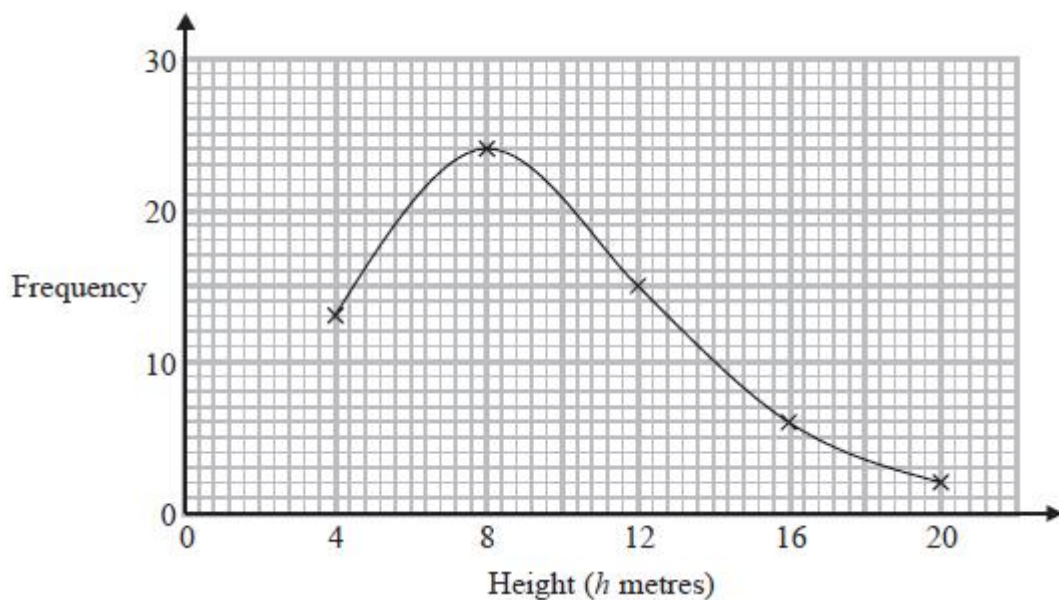
$$x = 21$$

25

17 The table shows the heights of 60 trees

Height (h metres)	Frequency
$0 < h \leq 4$	13
$4 < h \leq 8$	24
$8 < h \leq 12$	15
$12 < h \leq 16$	6
$16 < h \leq 20$	2

Freddie plots the frequency polygon below



Write down 2 things that are wrong with this graph

1. *hasn't used the midpoint*
2. *hasn't used straight lines*

(Total for Question 16 is 2 marks)

- 18 Make a the subject of the formula

$$s = ut + \frac{1}{2}at^2$$

$$s - ut = \frac{1}{2}at^2$$
$$2(s - ut) = at^2$$

$$\frac{2(s - ut)}{t^2} = a$$

(Total for Question 18 is 3 marks)

- 19 Leo buys 10 Pokémon cards for £75
He sells 6 of the cards for £10.50.
He sells the remaining cards for £27.
Work out the percentage profit that Leo made.

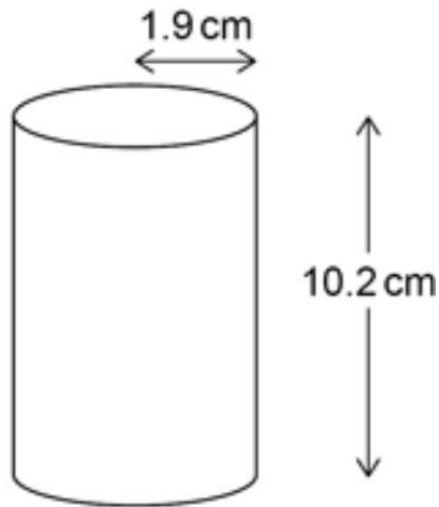
$$6 \times 10.50 = 63$$
$$4 \times 27 = \underline{108}$$
$$171$$

$$171 - 75 = 96$$

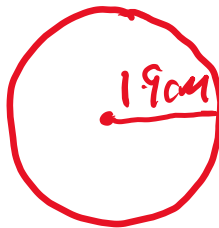
$$\frac{96}{75} \times 100 = 128\%$$

(Total for Question 19 is 4 marks)

20 The diagram shows a cylinder.

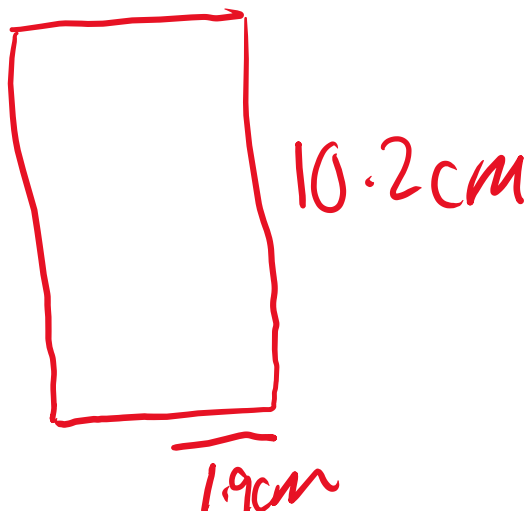


(a) Draw the plan of the cylinder, labelling any dimensions.



(1)

(b) Draw the side elevation of the cylinder, labelling any dimensions.



(2)

(Total for Question 20 is 3 marks)

21

Amber rotates a shape A 90° clockwise about (0,1) to make shape B.
She says that this is the only way to describe the rotation.

Amber is wrong.

Write down an alternative way of describing the same rotation.

*270° anti-clockwise about
(0,1)*

(Total for Question 21 is 2 marks)

22

Solve algebraically

$$\begin{array}{l} 3x + 2y = 9.5 \quad \times 5 \\ 7x - 5y = 41.5 \quad \times 2 \end{array}$$

$$\begin{array}{r} +15x + 10y = 47.5 \\ +14x - 10y = 83 \\ \hline 29x = 130.5 \end{array}$$

$$29x = 130.5$$

$$x = 4.5$$

$$3(4.5) + 2y = 9.5$$

$$13.5 + 2y = 9.5$$

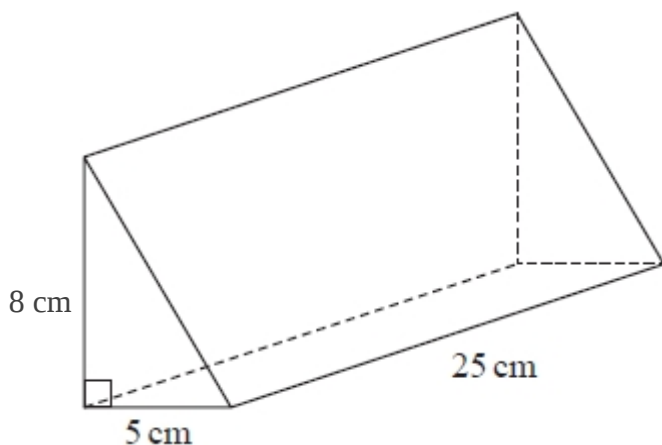
$$2y = -4$$

$$y = -2$$

(Total for Question 22 is 3 marks)

23

The diagram shows a prism.



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

The base of the triangle has length 5 cm

The prism has length 25 cm

The mass of the prism is 250g.

Work out the density of the prism.

$$\frac{8 \times 5}{2} \times 25 = 500 \text{ cm}^3$$

$$250 \text{ g} : 500 \text{ cm}^3$$

$$0.5 \text{ g} : 1 \text{ cm}^3$$

$$0.5 \text{ g/cm}^3$$

- 24 In the 2026 local elections in Lancaster, the Green Party candidate received 70% of the vote.

This represents a 25% increase since the last election.

Work out the percentage of votes received in the previous election.

$$70 = 125\%$$

$$56 = 100\%$$

$$56\%$$

(Total for Question 24 is 3 marks)

- 25 Express on the number line

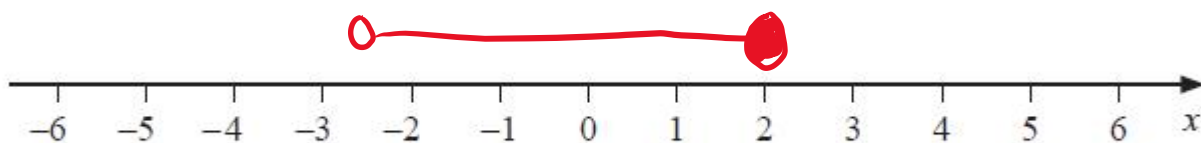
$$-4 < 2x + 1 \leq 5$$

$$\begin{array}{ccc} -1 & -1 & -1 \end{array}$$

$$-5 < 2x \leq 4$$

$$\div 2 \quad \div 2 \quad \div 2$$

$$-2.5 < x \leq 2$$



(Total for Question 25 is 3 marks)

- 26 The circumference of a circle is 24π .

Work out the area of the same circle

$$\pi \times D = 24\pi$$

$$D = 24$$

$$r = 12$$

$$\pi \times 12^2 = 144\pi$$

or

$$452.39$$

(Total for Question 26 is 3 marks)

- 27 AB is a straight line

The coordinates of A are (4,9).

The coordinates of B are (10,27)

Work out the equation of the line AB

$$\frac{27-9}{10-4} = \frac{18}{6} = 3$$

$$y = 3x + c$$

$$9 = 3(4) + c$$

$$9 = 12 + c$$

$$c = -3$$

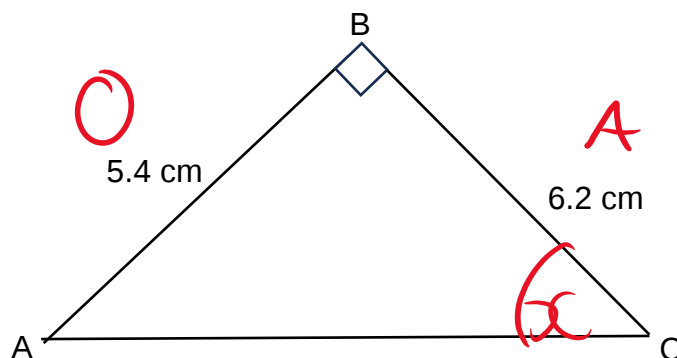
$$y = 3x - 3$$

(Total for Question 27 is 4 marks)

28 The right-angled triangle ABC has been drawn below.

AB = 5.4 cm

BC = 6.2 cm



Work out the size of angle BCA.

Give your answer correct to 3 significant figures.

$$\tan(x) = \frac{5.4}{6.2} \quad x = \tan^{-1}\left(\frac{5.4}{6.2}\right)$$

41.1

(Total for Question 28 is 3 marks)

29

(a) Express 120 as a product of primes

$$\begin{array}{r}
 120 \\
 \wedge \\
 2 \quad 60 \\
 \wedge \\
 2 \quad 30 \\
 \wedge \\
 3 \quad 10 \\
 \wedge \\
 2 \quad 5
 \end{array}$$

$$2^3 \times 3 \times 5$$

(2)

(b) Hence, or otherwise, express 120×84 as a product of prime factors

$$\begin{array}{r}
 84 \\
 \wedge \\
 2 \quad 42 \\
 \wedge \\
 7 \quad 6 \\
 \wedge \\
 3 \quad 2
 \end{array}$$

$$(2^2 \times 3 \times 7) \times (2^3 \times 3 \times 5)$$

$$2^5 \times 3^2 \times 5 \times 7$$

(2)

(Total for Question 29 is 4 marks)

Total for this paper is 80 marks