



THIRD SPACE  
LEARNING

# Mathematics

## Paper 3

### (Calculator)

## Foundation Tier

AQA GCSE

SET 4

# Mathematics Paper 3 (Calculator) Foundation Tier Edexcel

## GCSE SET 4

Name

Total marks

Paper length: 1hr 30mins



### Instructions

- Use black ink or ball-point pen.
- Fill in the boxes at the top of this page with your name, centre number and candidate number.
- Answer all questions.
- Answer the questions in the spaces provided – there may be more space than you need.
- You must show all your working.
- Diagrams are NOT accurately drawn, unless otherwise indicated.
- Calculators may be used.

### Information

- The total mark for this paper is 80
- The marks for each question are shown in brackets – use this as a guide as to how much time to spend on each question.

### Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Question	Mark
1	
2	
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27	
28	
29	

**You must have:** Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser. Tracing paper may be used.

This practice paper is based on the topics from the **advanced information for the November 2025 exam series**.

*Please note, this practice paper is an example to help revision, these topics can be tested in other ways and other topics may be included in the actual papers*

1



Work out the area of this rectangle.

Circle your answer.

**[1 mark]**

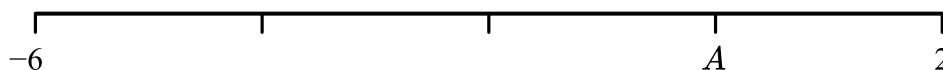
$19\text{cm}^2$

$9.5\text{cm}^2$

$22\text{cm}^2$

$11\text{cm}^2$

2 Here is a number line.



Which number is at  $A$ ?

Circle your answer.

**[1 mark]** $-2$  $-1$  $0$  $1$ 

3 Circle the number that is a factor of 20.

**[1 mark]** $3$  $4$  $8$  $40$

**4** What is the time 3 hours and 20 minutes after 7.45am?

**[1 mark]**

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Answer \_\_\_\_\_

**5** Work out  $\frac{1}{5}$  of 24.

**[1 mark]**

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Answer \_\_\_\_\_

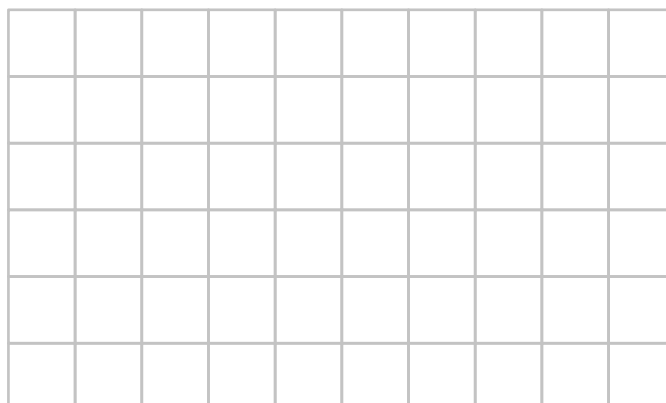
**6** On the grid, draw a quadrilateral with

2 lines of symmetry

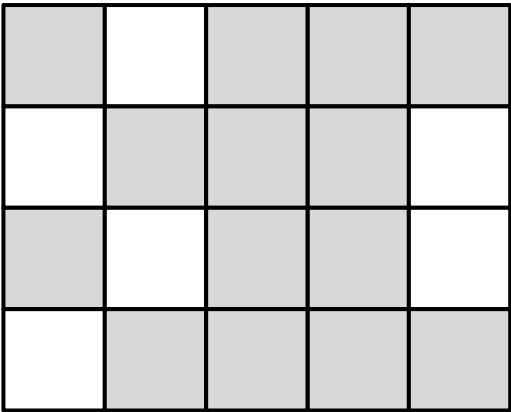
2 acute angles

2 obtuse angles

**[2 marks]**



7



What fraction of the shape is shaded?  
Give your answer in its simplest form.

[2 marks]

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Answer \_\_\_\_\_

8 The table shows the total number of pumpkins and toffee apples sold in a shop in the three weeks before Halloween.

	Week 1	Week 2	Week 3
Number of pumpkins	21	55	87
Number of toffee apples	64	52	49

Over the 3 weeks, were more pumpkins or toffee apples sold?  
Show how you decide.

[3 marks]

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Answer \_\_\_\_\_

9 Gavin thinks of a number.

He divides his number by 4 and then adds 8.  
His answer is 29.

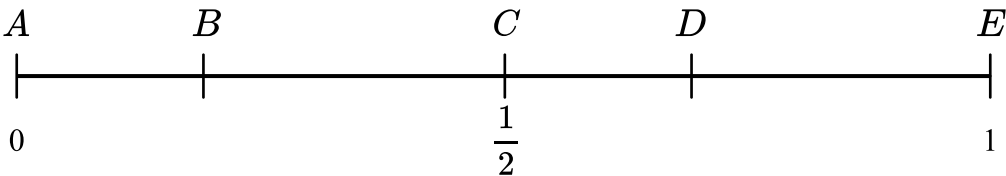
What number did Gavin think of?

[3 marks]

Answer \_\_\_\_\_

10 Maia rolls a fair, 6 sided dice.

The probability scale shows the probability of different events.

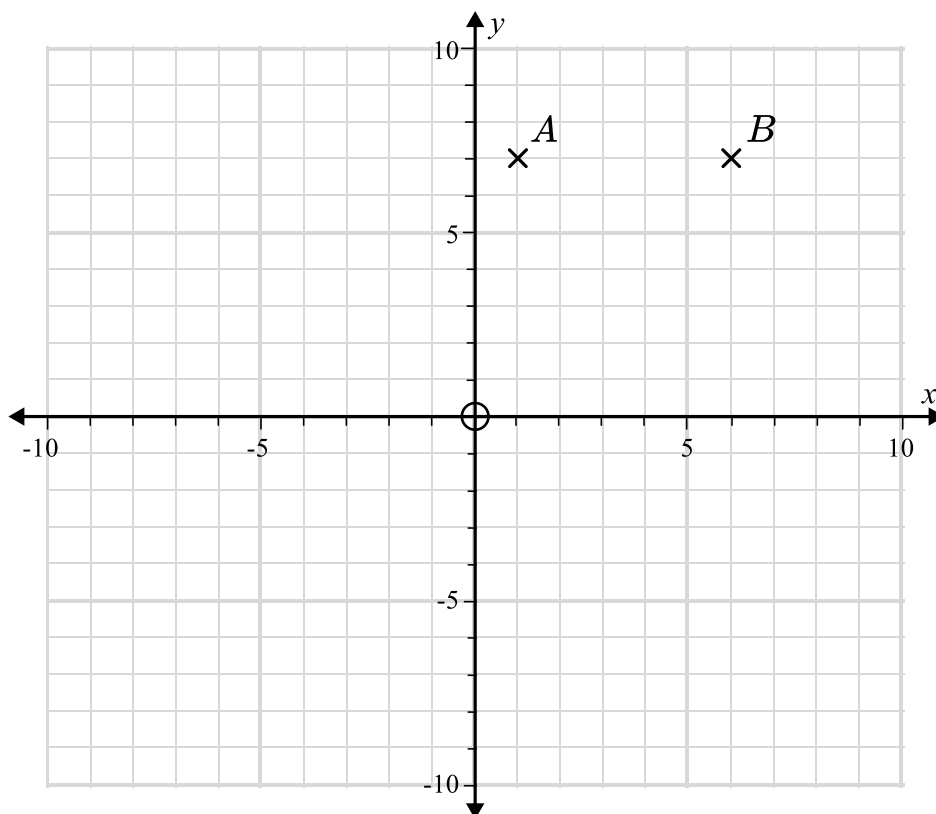


In the table, write the letter corresponding to each of the following events.

[3 marks]

Maia rolls an even number	
Maia rolls a factor of 6	
Maia rolls a 7	

11 Here is a centimetre grid.



(a) Write down the coordinates of point  $A$

[1 mark]

Answer ( \_\_\_\_\_ , \_\_\_\_\_ )

(b) On the grid, mark with a cross ( $\times$ ) the point with coordinates  $(1, -2)$

Label the point  $C$ .

[1 mark]

(c) A fourth point is added to form a rectangle.

Write down the coordinates of this point.

[2 marks]

Answer ( \_\_\_\_\_ , \_\_\_\_\_ )

- 12** A baker needs to make 17 batches of cupcakes.

Each batch needs 4 eggs.

The baker has 6 boxes of eggs.

There are 12 eggs in each box.

Show that the baker will have 4 eggs left over.

**[2 marks]**

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- 13** In a school sports cupboard there are 30 footballs, 24 rugby balls and 54 tennis balls.

Write the ratio footballs : rugby balls : tennis balls in its simplest form.

**[2 marks]**

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Answer \_\_\_\_\_



**14** Lowri measures all the angles in a quadrilateral.

Her results are  $37^\circ$ ,  $88^\circ$ ,  $112^\circ$  and  $103^\circ$ .

Explain why these results cannot be true.

**[2 marks]**

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**15** Work out  $\frac{3.1 \times 7.8}{8 - 6.8}$

Give your answer as a decimal.

**[2 marks]**

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Answer \_\_\_\_\_

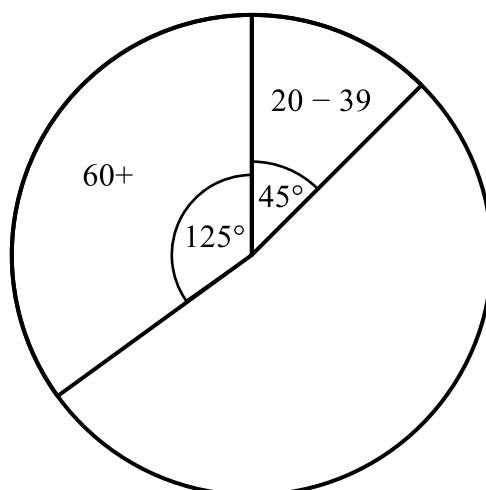
**16** A hospital recorded the ages of people in A&E.

Here is an incomplete table and an incomplete pie chart showing the results.

Use the information to complete the table and the pie chart.

**[5 marks]**

Age	Frequency	Angle
0 – 19	21	
20 – 39		
40 – 59		
60 +	25	



**17 (a)** Round 3637 to 2 significant figures.

**[1 mark]**

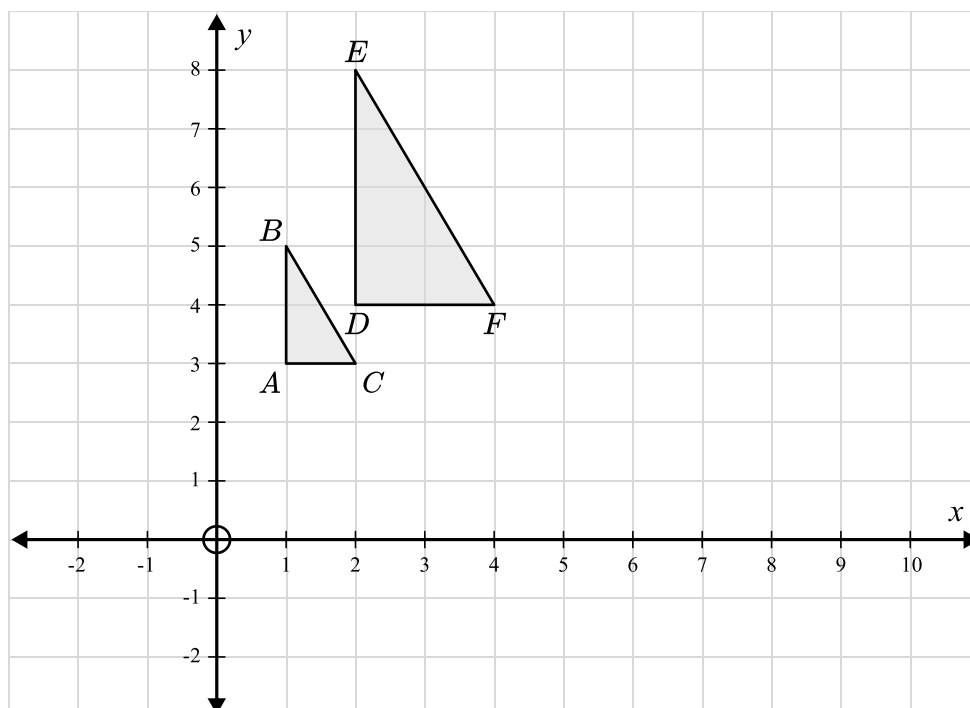
Answer \_\_\_\_\_

**(b)** Round 0.00352 to 1 significant figure.

**[1 mark]**

Answer \_\_\_\_\_

18 Here is a diagram showing triangle  $ABC$  and triangle  $DEF$ .



Describe fully the single transformation that maps triangle  $ABC$  onto triangle  $DEF$ .

[2 marks]

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19 (a) Expand and simplify fully  $4(y + 5) - 2(y + 4)$

[2 marks]

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Answer \_\_\_\_\_

(b) Factorise  $12x - 16$

[1 mark]

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Answer \_\_\_\_\_

20 Change  $1\text{cm}^3$  to  $\text{mm}^3$ .

Circle your answer.

[1 mark]

$10\text{mm}^3$

$100\text{mm}^3$

$1000\text{mm}^3$

$100000\text{mm}^3$

- 21** Jovy buys a car for £12000.  
She sells the car for £10560.

Calculate the percentage loss that Jovy makes.

**[3 marks]**

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Answer \_\_\_\_\_

- 22** Make  $p$  the subject of the formula  $m = 4p - n$ .

**[2 marks]**

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Answer \_\_\_\_\_

- 23** Jacob's bike tyre has a diameter of 18 *inches*.

Jacob cycles 1*km*.

Given that 1 *inch* = 2.5*cm*, work out how many times Jacob's wheel rotates.

Give your answer to the nearest whole number.

**[4 marks]**

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Answer \_\_\_\_\_

- 24** It takes 12 hours for 6 machines to make 1440 car parts.

How many hours would it take 8 machines to make the same number of parts?

**[2 marks]**

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Answer \_\_\_\_\_

25 The table gives information about the number of siblings that the 30 children in class 6 have.

Number of siblings	Frequency	
0	4	
1	7	
2	10	
3	6	
4	3	

(a) Write down the modal number of films watched

[1 mark]

Answer \_\_\_\_\_

(b) Work out the mean number of siblings.

[3 marks]

Answer \_\_\_\_\_

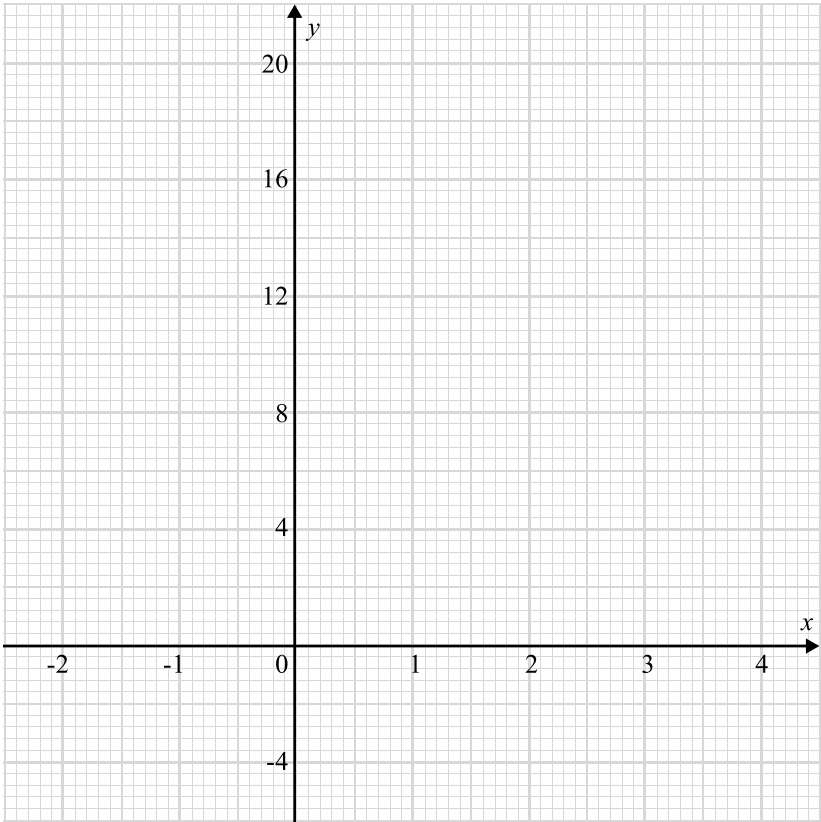
26 (a) Complete the table of values for  $y = x^3 - 3x$ .

[2 marks]

$x$	-2	-1	0	1	2	3
$y$		2		-2	2	

(b) On the grid, draw the graph of  $y = x^3 - 3x$  for values of  $x$  from -2 to 3.

[2 marks]



(c) Use your graph to find an estimate to the solution of the equation

$$x^3 - 3x = 10$$

[2 marks]

\_\_\_\_\_

Answer \_\_\_\_\_



- 27  $P$  is the point with coordinate  $(3, 4)$   
 $Q$  is the point with coordinate  $(a, -2)$ .

The gradient of the line  $PQ$  is 2

Work out the value of  $a$ .

**[3 marks]**

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Answer \_\_\_\_\_

- 28** Jack bought a television for £360. The television was reduced by 20%.  
Jack wants to calculate the original price of the television.

Jack does this calculation:

$$20\% \text{ of } 360 = 0.2 \times 360 = £72$$

$$£360 + £72 = £432$$

- (a)** Explain Jack's mistake

**[1 mark]**

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- (b)** Jack also bought a laptop for £612. The laptop was reduced by 15%.  
Work out the original price of the laptop.

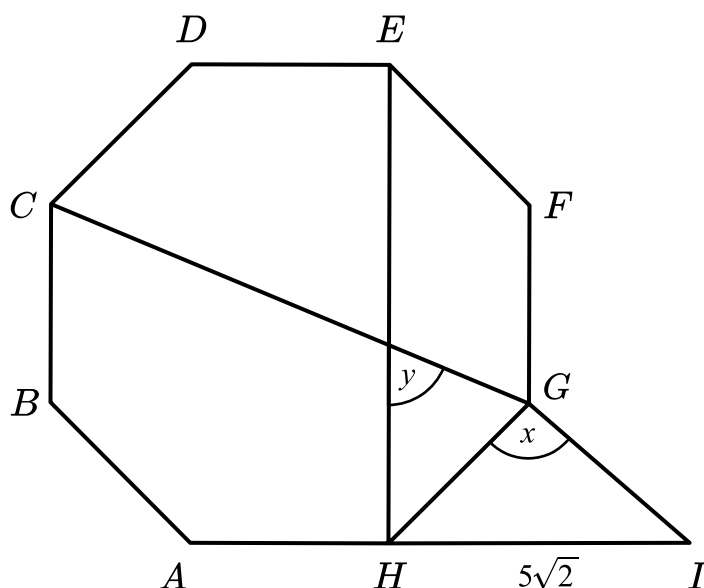
**[2 marks]**

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Answer \_\_\_\_\_

29



Here is a regular octagon and a triangle.

$AHI$  is a straight line.

$GH = GI$

$HI = 5\sqrt{2} \text{ cm}$

**(a)** Show that angle  $x$  is  $90^\circ$ .

Give a reason for each stage of your working.

**[3 marks]**

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**Question continued on the next page**

(b) Work out the size of angle  $y$ .

[3 marks]

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Answer \_\_\_\_\_

(c) Work out the perimeter of the octagon,  $ABCDEFGH$ .

[4 marks]

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Answer \_\_\_\_\_

**End of Questions**

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