



THIRD SPACE  
LEARNING

# Mathematics

## Paper 3

### (Calculator)

## Foundation Tier

Edexcel 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	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

**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 Write the number twenty thousand and thirty-two in figures.

-----  
(Total for Question 1 is 1 mark)

---

- 2 Write these numbers in order of size.  
Start with the smallest.

7            -5            -2            3            -6

-----  
(Total for Question 2 is 1 mark)

---

- 3 Write down two factors of 20.

-----  
(Total for Question 3 is 1 mark)

---

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

-----  
(Total for Question 4 is 1 mark)

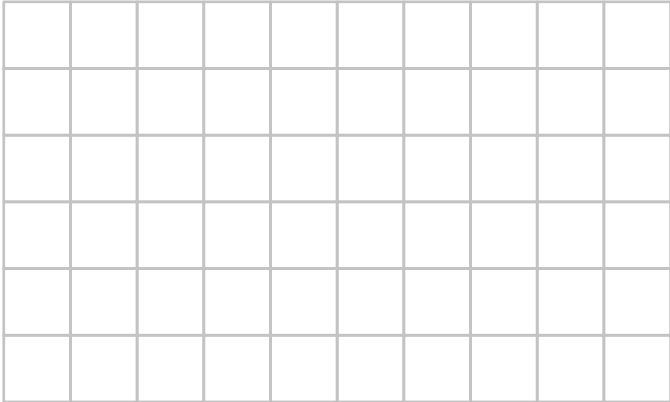
---

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

-----  
(Total for Question 5 is 1 mark)

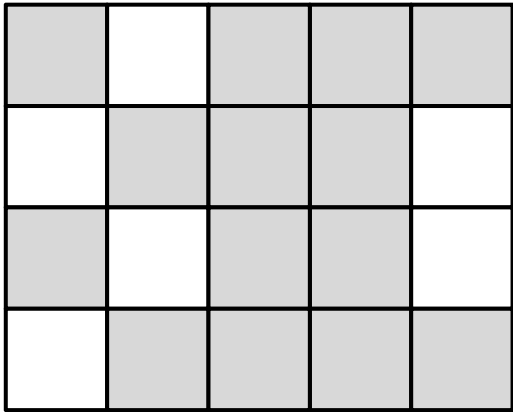
---

- 6 On the grid, draw a quadrilateral with
- 2 lines of symmetry
  - 2 acute angles
  - 2 obtuse angles



(Total for Question 6 is 2 marks)

7



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

-----  
(Total for Question 7 is 2 marks)

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.

-----  
(Total for Question 8 is 3 marks)

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?

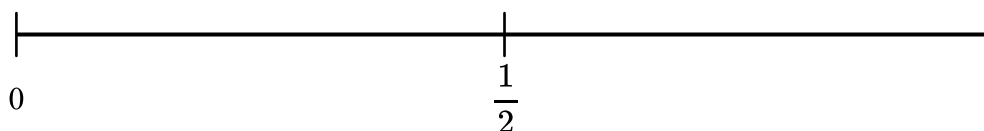
-----  
(Total for Question 9 is 3 marks)

**10** Here is a list of 8 numbers.

3      4      4      5      6      6      6      8

Maia picks one of these numbers at random.

**(a)** On the probability scale, mark with a cross (X) the probability that Maia picks a 4.



**(1)**

**(b)** Find the probability that Maia picks a number greater than 4.

**(2)**

**(Total for Question 10 is 3 marks)**

**11** A baker needs to make 25 batches of cupcakes.

Each batch needs 3 eggs.

The baker has 6 boxes of eggs.

There are 12 eggs in each box.

Does the baker have enough eggs?

Show how you get your answer.

**(Total for Question 11 is 2 marks)**

- 12** 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.

----- : ----- : -----  
(Total for Question 12 is 2 marks)

- 13** 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.

-----  
-----  
-----  
(Total for Question 13 is 2 marks)

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

Give your answer as a decimal.

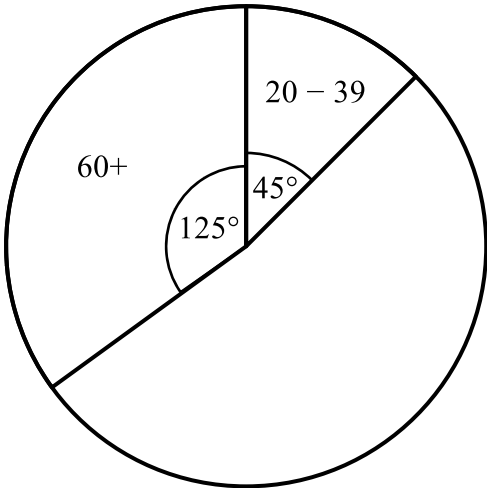
-----  
(Total for Question 14 is 2 marks)

**15** 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.

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



(Total for Question 15 is 5 marks)

**16 (a)** Write 3637 to 2 significant figures.

(1)

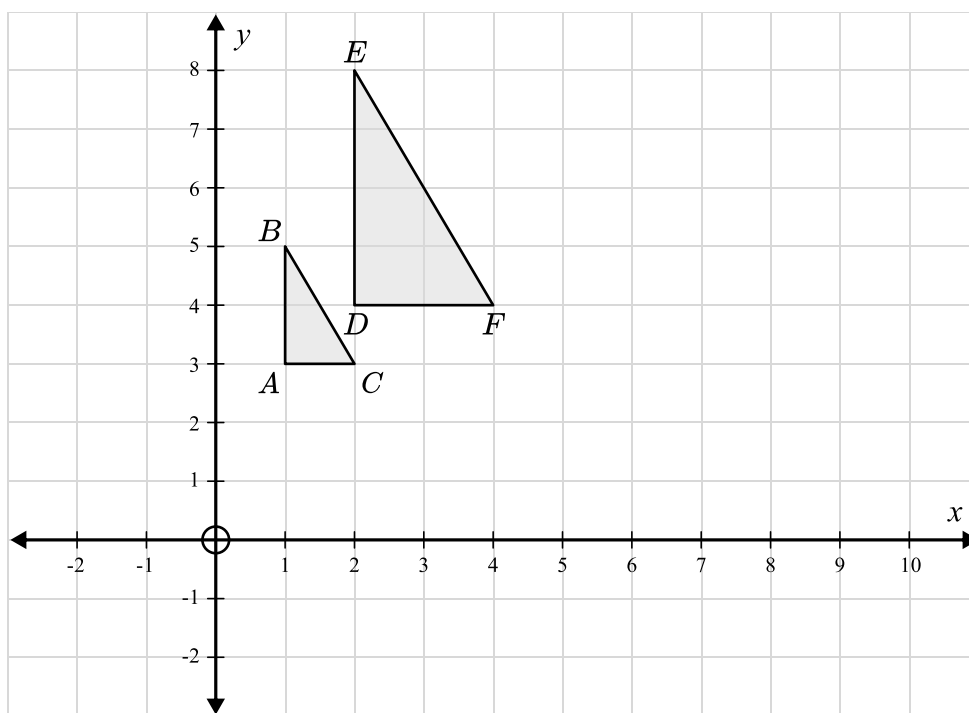
**(b)** Write 0.00352 to 1 significant figure.

(1)

(Total for Question 16 is 2 marks)



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



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

-----

-----

-----

(Total for Question 17 is 2 marks)

18 (a) Expand and simplify  $4(y + 5) - 2(y + 4)$ .

-----  
(2)

(b) Factorise  $12x - 16$ .

-----  
(1)

(Total for Question 18 is 3 marks)

---

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

-----  
 $\text{mm}^3$

(Total for Question 19 is 1 mark)

---

20 Jovy buys a car for £12000.

She sells the car for £10560.

Calculate the percentage loss that Jovy makes.

-----  
%

(Total for Question 20 is 3 marks)

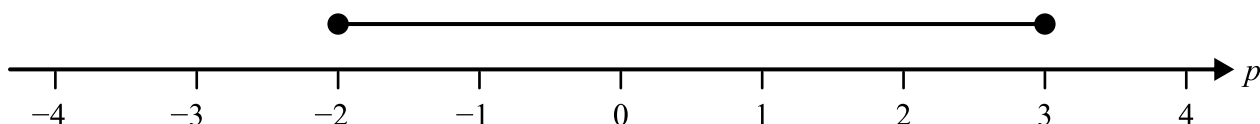
---

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

$p =$  .....

(Total for Question 21 is 2 marks)

22 Here is a number line.



Dewi is asked to write down the inequality shown on the number line.

Dewi writes  $-2 < p < 3$

Is Dewi correct? Explain your answer.

.....

.....

(Total for Question 22 is 1 mark)

- 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.

-----  
**(Total for Question 23 is 4 marks)**

- 24** 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

Work out the mean number of siblings.

-----  
**(Total for Question 24 is 3 marks)**

25 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?

hours

(Total for Question 25 is 2 marks)

26 In a bag there are only red marbles, blue marbles, green marbles and yellow marbles.  
A marble is going to be taken at random from the bag.

The table shows the probabilities of taking a red marble or a blue marble.

Colour	red	blue	yellow	green
Probability	0.15	0.45		

The probability of taking a yellow marble is 3 times the probability of taking a green marble.

(a) Complete the table.

(2)

(b) Lucy picks a marble out of the bag, notes its colour and then replaces it.  
She does this 200 times.  
How many times would Lucy expect to pick out a red marble?

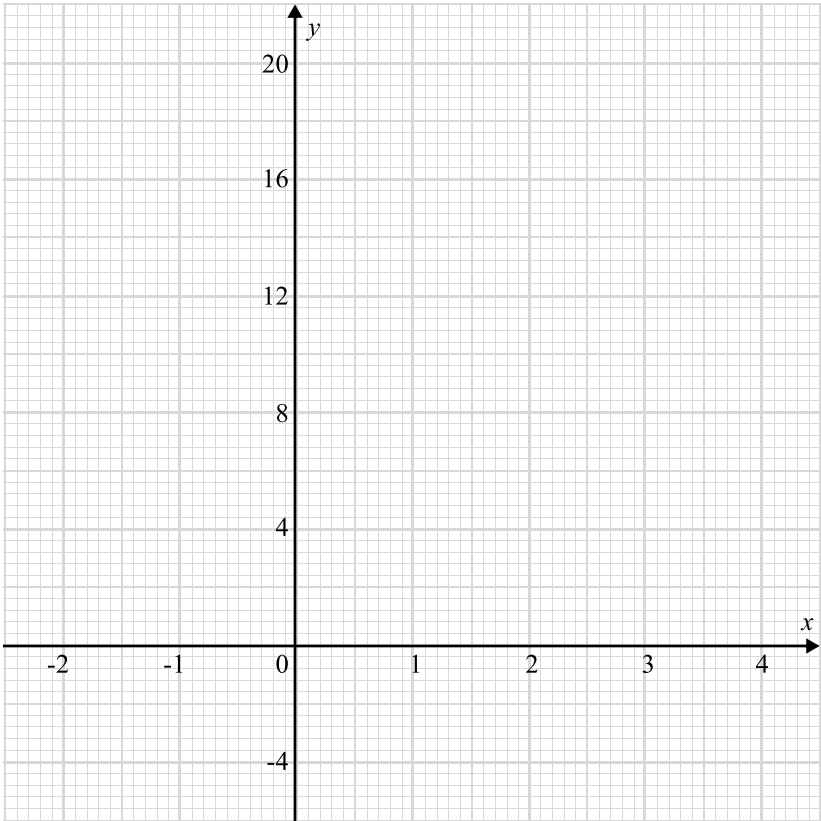
(2)

(Total for Question 26 is 4 marks)

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

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

(2)



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

(2)

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

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

(2)

(Total for Question 27 is 6 marks)

- 28**  $P$  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  $a$ .

$a =$  \_\_\_\_\_

**(Total for Question 28 is 3 marks)**

- 29** 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:

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

$$\text{£}360 + \text{£}72 = \text{£}432$$

- (a)** Explain Jack's mistake.

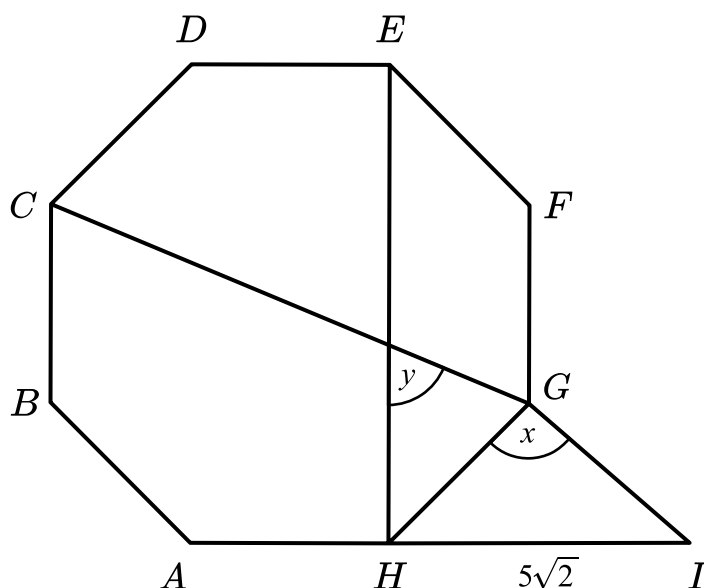
-----  
-----  
**(1)**

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

-----  
**(2)**

**(Total for Question 29 is 3 marks)**

30



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)

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

(3)

Question continued on the next page



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

----- *cm*

(4)

(Total for Question 30 is 10 marks)

---

End of Questions

# Help ease the pressure with a personalised revision programme for each of your target KS4 students

Our one to one GCSE revision programme is designed to help your target students reach their potential in their GCSE maths exams.

Our specialist maths tutors work one to one with each student, focusing on securing core KS4 content and building familiarity with the kinds of questions they'll be tackling in their GCSE exams.

Get in touch today:

✉ [hello@thirdspacelearning.com](mailto:hello@thirdspacelearning.com)

🔍 [thirdspacelearning.com](https://thirdspacelearning.com)

☎ 0203 771 0095