AQA

PRACTICE PAPER SET 4

Please write clearly, in block capitals.

Centre number | | | | | | Candidate number | | | | |

Surname _____

Forename(s) _____

Candidate signature _____

GCSE MATHEMATICS

F

Foundation Tier Paper 1 Non-Calculator

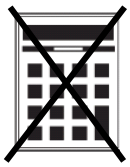
Exam Date Morning Time allowed: 1 hour 30 minutes

Materials

For this paper you must have:

- mathematical instruments

You must **not** use a calculator.



Instructions

- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Answer **all** questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 80.
- You may ask for more answer paper, graph paper and tracing paper. These must be tagged securely to this answer book.

Advice

- In all calculations, show clearly how you work out your answer.

For Examiner's Use	
Pages	Mark
2 - 3	
4 - 5	
6 - 7	
8 - 9	
10 - 11	
12 - 13	
14 - 15	
16 - 17	
18 - 19	
20 - 21	
22 - 23	
24 - 25	
TOTAL	

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

1 Solve $\frac{x}{6} = 12$

Circle your answer.

[1 mark]

2 6 18 72

2 Circle **all** the numbers that have 11 as a factor.

[1 mark]

121 122 132 133

3 Does a cuboid have **more** faces, edges or vertices?

Circle your answer.

[1 mark]

faces edges vertices

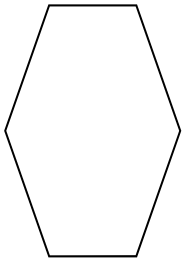
Do not write outside the box

4 Which shape is **not** a polygon?

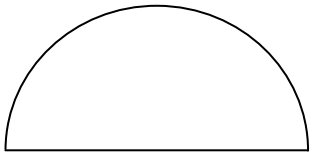
Circle the correct letter.

[1 mark]

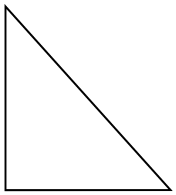
A



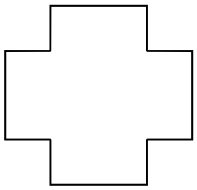
B



C



D



Turn over for the next question

4

5 This is how the scores in a quiz are worked out.

Correct answer	3 points
No answer	–1 point
Incorrect answer	–2 points

5 (a) Team A answer 7 of their first 10 questions.
They give 5 correct answers and 2 incorrect answers.

How many points do they score on the 10 questions?

[2 marks]

Answer _____

5 (b) Team B score 17 points on the first 10 questions.

Complete the table.

[3 marks]

	Number of questions	**Total points**
Correct answer		
No attempt		
Incorrect answer		
	Total = 10	Total = 17

Turn over for the next question

5

6 Which of these is smallest

25 centimetres as a fraction of 2 metres

or 30 grams as a fraction of 2 kilograms

or 11 pence as a fraction of £1 ?

You **must** show your working.

[5 marks]

Answer _____

Do not write outside the box

7 In a bag of coins

there are 36 coins

there is £6 altogether

$\frac{3}{4}$ of the coins are 10p coins

there are **no** £1 or £2 coins.

Work out **one** possible set of coins.

Complete the table.

[4 marks]

Coin	**Number**
	Total = 36

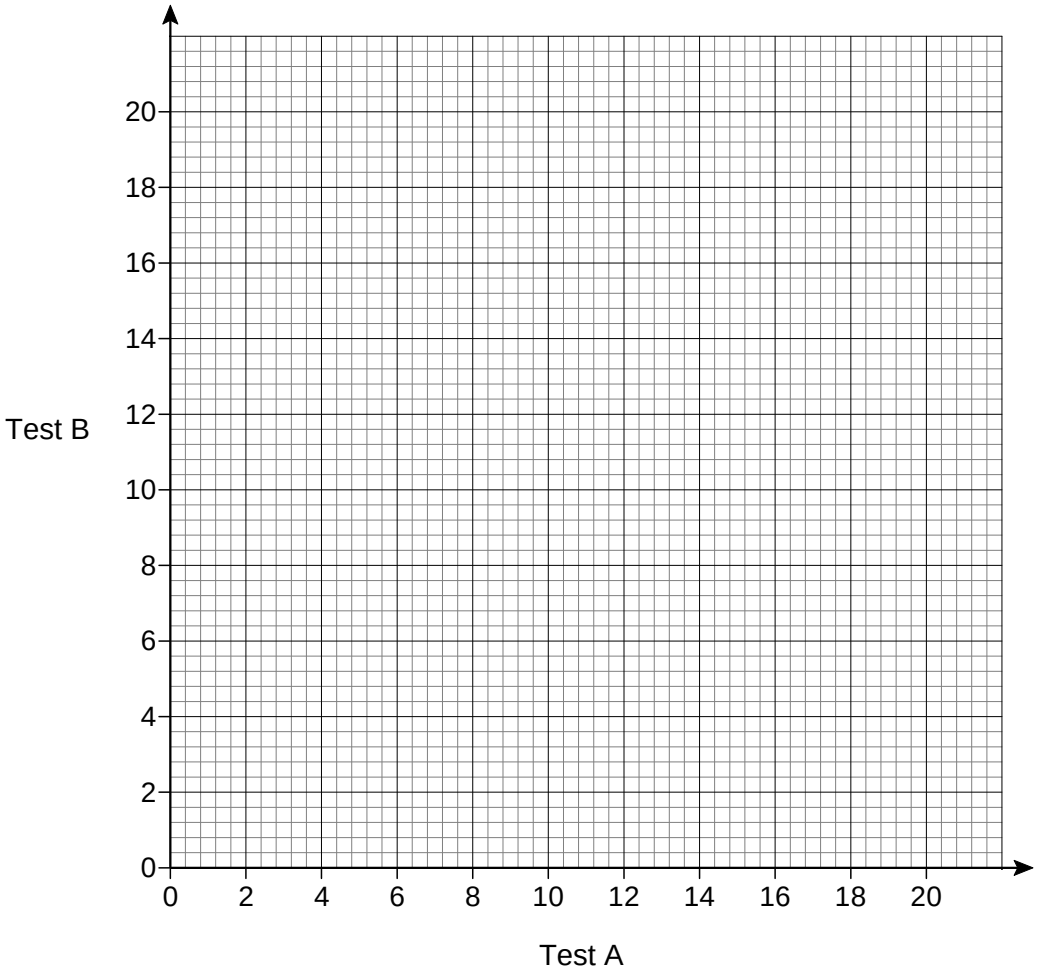
9

8 Here are the scores of 10 students in two tests.

Test A	3	6	8	9	9	10	11	12	13	15
Test B	6	5	10	11	10	5	18	17	20	14

8 (a) Plot the scores on the scatter graph.

[2 marks]



8 (b) What is the median score for test A?

[1 mark]

Answer _____

Do not write outside the box

8 (c) The data for one of the students on Test B seems unusual.

On the scatter graph, put a circle around the point that represents this student.

Give a reason for your choice.

[2 marks]

Turn over for the next question

5

9 The cost of fuel is £1.10 per litre.

1 gallon = 4.5 litres

9 (a) Work out the cost of 1 gallon.

[3 marks]

Answer £ _____

9 (b) A car travels 35 miles per gallon of fuel.

How many gallons are used for a journey of 105 miles?

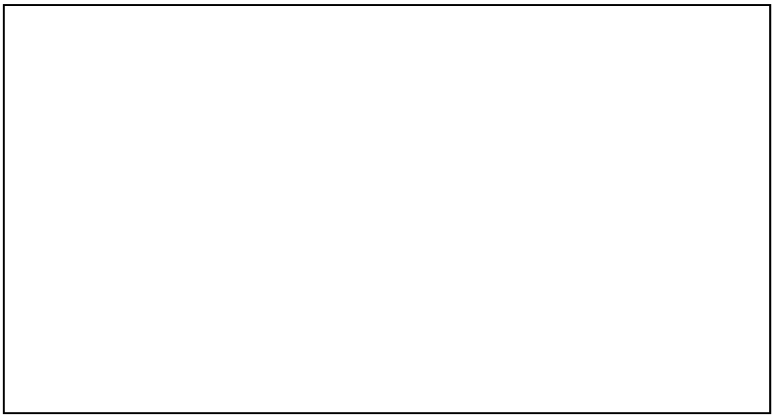
[2 marks]

Answer _____ gallons

Do not write outside the box

10 The diagram shows a rectangle.

Not drawn accurately



The rectangle is cut in half with one half thrown away.

This is repeated a number of times.

10 (a) Which size of rectangle is **not** possible after **three** cuts?

Circle your answer.

[1 mark]

4 cm by 24 cm

32 cm by 3 cm

16 cm by 12 cm

8 cm by 12 cm

10 (b) What fraction of the original rectangle is left after 3 cuts?

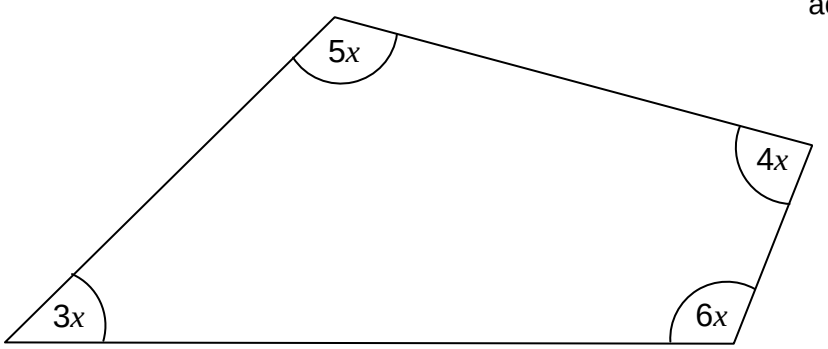
[2 marks]

Answer _____

8

11 Work out the value of x.

Not drawn accurately



[3 marks]

Answer _____ degrees

Do not write outside the box

12 Last season a football club sold 8000 season tickets at £250 each.

This season the season ticket price is reduced by 20% to £200

If the club sell 20% **more** tickets will the amount of money they receive increase, decrease or stay the same?

You **must** show your working

[5 marks]

Answer _____

Turn over for the next question

8

13 Solve $8x - 3 = 6x - 9$

[3 marks]

$x =$ _____

14 How many sixths are in 1.5 ?

Circle your answer.

[1 mark]

4 6 9 15

15 What is 150% of 36 ?

Circle your answer.

[1 mark]

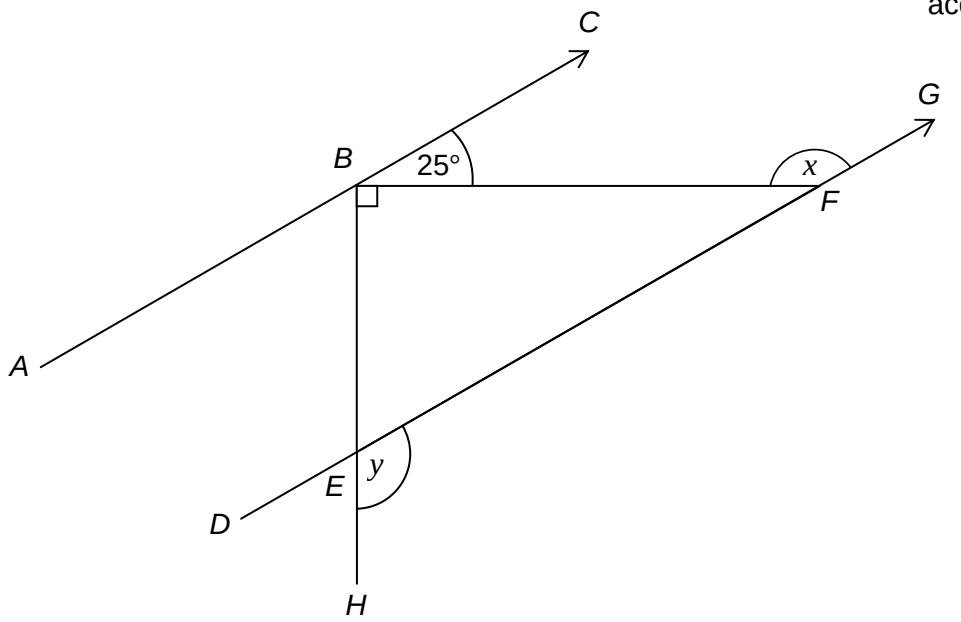
18 24 54 186

Do not write outside the box

16 *ABC* and *DEFG* are parallel lines.

BEH is a straight line.

Not drawn accurately



16 (a) Work out the size of angle x.

[1 mark]

Answer _____ degrees

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

You **must** show your working, which may be on the diagram.

[2 marks]

Answer _____ degrees

8

17 Harry is tiling a wall of area 25 m^2

A tub contains 15 kg of tile cement.

The instructions say 2 kg of tile cement will tile 1 m^2 of wall.

17 (a) How many tubs does Harry need to buy?

[3 marks]

Answer _____

17 (b) In fact, Harry uses more than 2 kg of tile cement per m^2

Without needing to buy more tubs,
what is the maximum amount he could use per m^2?

[2 marks]

Answer _____ kg

Do not write outside the box

18 Work out $\frac{3.6}{0.4}$

Circle your answer.

[1 mark]

90 9 0.9 0.09

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

[2 marks]

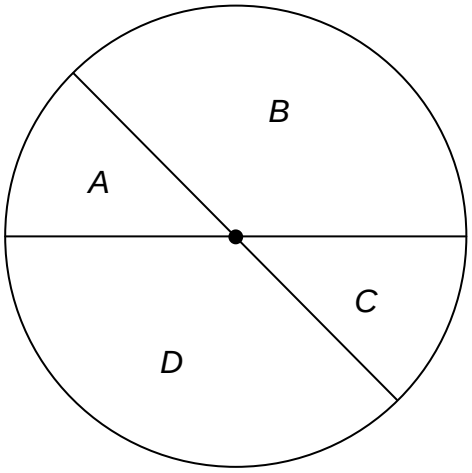
Answer _____

Turn over for the next question

8

20 A circle has radius 6 cm

Two diameters split the circle into four sectors, as shown.



Not drawn accurately

Area of sector *A* : Area of sector *B* = 1 : 3

Work out the area of sector *A*.

Give your answer in terms of π.

[3 marks]

Answer _____ cm^2

21 The table shows information about the times for 100 people to complete a task.

Time, t, (minutes)	Frequency
$0 < t \leqslant 5$	17
$5 < t \leqslant 10$	28
$10 < t \leqslant 15$	33
$15 < t \leqslant 20$	22

The shortest time was 3 minutes 40 seconds.

21 (a) Work out the **greatest** possible range of times.

[2 marks]

Answer _____ minutes _____ seconds

21 (b) Jack says,

"The median time is exactly 10 minutes."

Give a reason why he **must** be incorrect.

[1 mark]

Turn over for the next question

6

Do not write outside the box

22 Work out the value of $\left(\sqrt{5}\right)^2 + \left(\sqrt{6}\right)^2 - \left(\sqrt{7}\right)^2$

You **must** show your working.

[1 mark]

Answer _____

23 Using ruler and compasses,

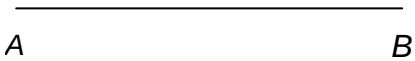
construct a triangle *ABC* so that

BC is perpendicular to *AB*

AC = 9 cm

AB has been drawn for you.

[3 marks]



4

24 A bag contains 20 counters.

10 of the counters are red, 8 are blue and 2 are yellow.

Three counters are taken out at random.

24 (a) If all three of these counters are the **same** colour, what is the probability that the next counter taken out at random is yellow?

[1 mark]

Answer _____

24 (b) If all three of these counters are **different** colours, what is the probability that the next counter taken out at random is yellow?

[1 mark]

Answer _____

25 List the integers that satisfy both these inequalities.

$2x + 7 < 0$

and $x > -10$

[2 marks]

Answer _____

26 y is directly proportional to x.

Complete the table.

[2 marks]

x	−8	0	7
y			63

Turn over for the next question

6

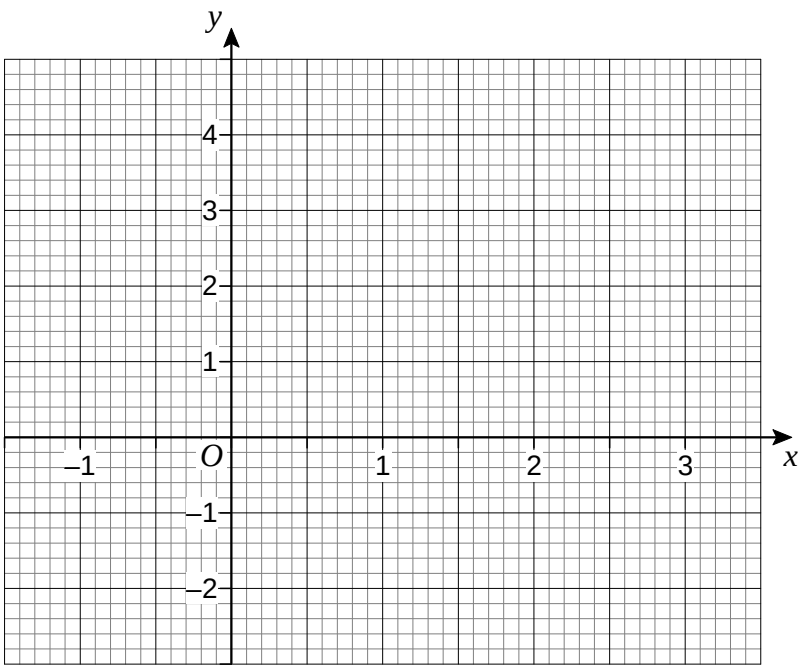
27 (a) Complete the table of values for $y = x^2 - 2x$

[2 marks]

x	–1	0	1	2	3
y		0	–1		

27 (b) Draw the graph of $y = x^2 - 2x$ for values of x from –1 to 3

[2 marks]



27 (c) Write down the coordinates of the turning point of the graph.

[1 mark]

Answer (_____ , _____)

28 Jon is drawing a quadrilateral.

The length of each side is 5.2 cm to 1 decimal place.

28 (a) Complete the error interval for the length of one side.

[2 marks]

Answer _____ cm $\leqslant$ length $<$ _____ cm

28 (b) Complete the error interval for the perimeter.

[2 marks]

Answer _____ cm $\leqslant$ perimeter $<$ _____ cm

END OF QUESTIONS

9

There are no questions printed on this page

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