AQA ◢ Mock Test Papers
Paper1 -Test3

GCSE Mathematics

Foundation tier -- Paper1

F

You must not use a calculator

For this paper you must have:
- ☐ mathematical instruments.
- ☐ Formula sheet (enclosed)

Morning

1 hour 30 minutes

Instructions

Use black ink or black ball-point pen.
Draw diagrams in pencil. Fill in the boxes at the bottom of this page.
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.
In all calculations, show clearly how you work out your answer.

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 workout your answer

Answer all questions in the spaces provided.

1   How many millimetres are there in 2.5 metres? Circle your answer:

[1 mark]

0.25   25   250   2500

2   Circle the fraction that is not equivalent to $\dfrac{3}{7}$

[1 mark]

6/14   9/21   12/28   15/35

3   Simplify 8b−(3b+5) . Circle your answer

[1 mark]

5b+5   5b−5   5b+3   5b−3

Prepare 4 GCSEs

4   a)   Solve x– 8 = 17;   Find the value of x

[1 mark]

Answer _____

4 b) Solve 4y = 32 ;   Find the value of y   [1 mark]

_____

_____

Answer _____

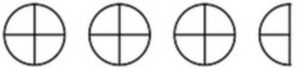4   c) Solve 5+Z =15 ;   Find the value of Z   [1 mark]

_____

_____

Answer _____

Turn over for the next question

6

Turn over ▶

Prepare 4 GCSEs

5   Rory counted the pieces of homework he had done in three subjects.

He draws a pictogram to show the results.

Key: ⊕ represents 4 pieces of homework

Maths	⊕ ⊕ ⊕ ⊕ ⊕
English	⊕ ⊕ ⊕ ◖
Science	

5 (a)   Rory had done 5 piece.

Show this information on the pictogram.

[1 mark]

5 (b)   Rory spent 30 minutes on each piece of homework.

Work out the total time he spent on homework for these three subjects.

Give your answer in hours and minutes.

[3 marks]

_____

_____

_____

_____

_____

_____

Answer _____ hours _____ minutes

6   Charlie will pay income tax if he earns more than £12 500 in a year.

After 8 months he has earned a total of £7600

For the rest of the year he earns £1200 each month.

Will he pay income tax?

You must show your working.

[3 marks]

_____

_____

_____

_____

_____

_____

7   Rearrange $c = \dfrac{d + 2}{4}$ to make d the subject.

[2 marks]

_____

_____

_____

Answer _____

Prepare 4 GCSEs

8   Anna buys 3 oranges and 4 pears.

The total cost is £4.80.
Each orange costs 60p.

Work out the cost in pence of each pear.

[4 marks]

Answer _____ pence

Prepare 4 GCSEs

Do not write outside the box

9   Workout 25% of 800

[1 mark]

Answer _____

10   Here is a calculation.

$$582 \times 30 = 17\ 460$$

Use the calculation to help answer the following questions.

10 (a)   Write down the answer to   17460÷ 582

[1 mark]

Answer   _____

10 (b)   Circle the answer to   123 × 40

[1 mark]

4920   4290   4902   4093

7

Turn over ▶

Prepare 4 GCSEs

11   A travel company is taking some passengers on a trip.

They can use coaches or minibuses.

Each coach can carry 45 passengers.

Each minibus can carry 15 passengers.

The passengers going on the trip would exactly fill 4 coaches.

If the company uses only minibuses, how many will they need?

[4 marks]

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Answer _____

12   a) Workout 9977 ÷ 11   [2 marks]

_____

_____

_____

_____

Answer   _____

b) Workout $\dfrac{5}{4} + \dfrac{2}{3}$

[3 marks]

_____

_____

_____

_____

_____

_____

Answer   _____

9

Turn over ▶

Prepare 4 GCSEs

13 (a) Find an expression for the nth term of the sequence which starts 7, 11, 15, 19, 23.

[2 marks]

_____

_____

_____

_____

13 (b) *All the terms of a geometric progression are positive.*
The second and fourth terms are shown:
....., 9,...,81
Work out the first and third terms.

[2 marks]

Prepare 4 GCSEs

14 a)   Complete the table of values for $y = x^3$

[1 mark]

x	–2	–1	0	1	2
y					

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

[2 marks]
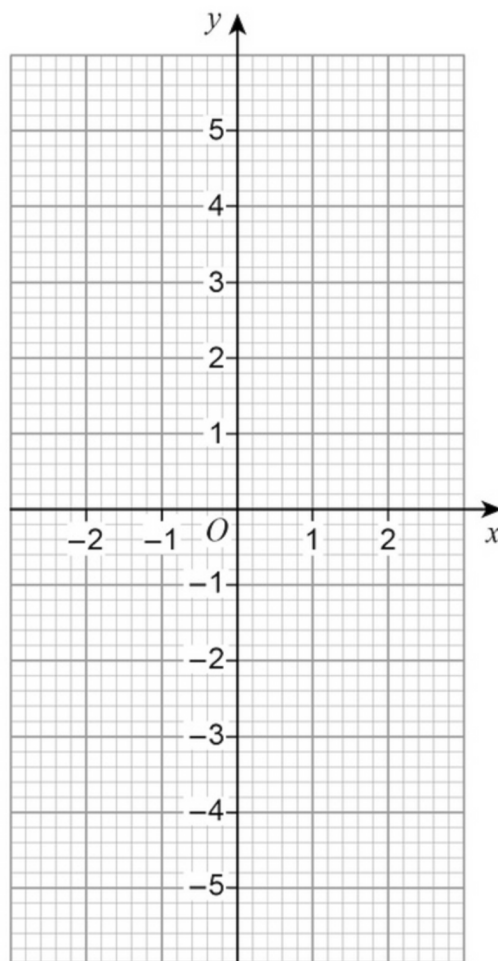
14 c) Use your graph to estimate the value of $\sqrt[3]{20}$

[2 marks]

Answer _____

9

Prepare 4 GCSEs

16   Solve $\dfrac{4w}{20} = \dfrac{8}{5}$

[2 marks]

$w =$ _____

17 a)   Estimate $-\sqrt{89}$

[1 mark]

_____

_____

17 b)   Calculate 30% of 90   [2 marks]

8

Prepare 4 GCSEs

17 c)   Calculate $\frac{2}{5}$ of 100   [2 marks]

_____

_____

_____

18   The length of a rectangle is 10.8cm.   [3 marks]
       The perimeter of the rectangle is 28.8cm.
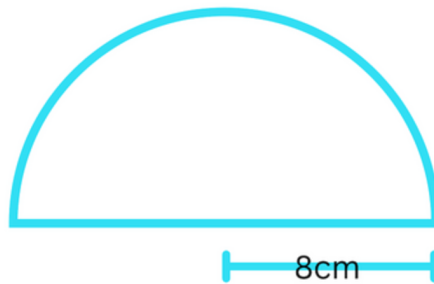   Calculate the width of the rectangle.

width

10.8 cm
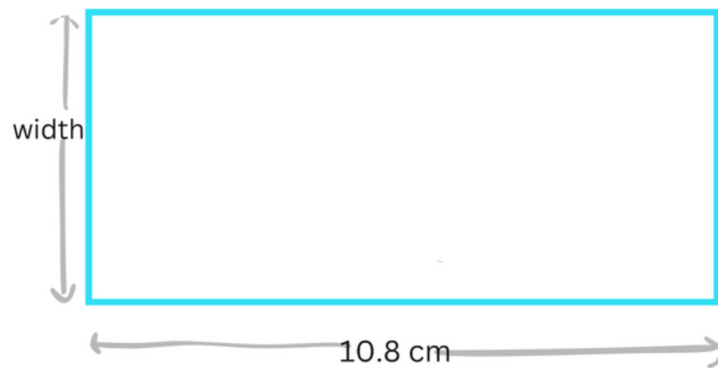
Not drawn accurately

_____

_____

_____

_____

19   Workout $2\frac{4}{5} \times 1\frac{3}{7}$ Give your answer as a mixed number in it's simplest form

[3 marks]

_____

_____

_____

_____

20   The diagram shows a semicircle of radius 8 cms.   [2 marks]

Workout the area of semi-circle. Give your answer in terms of π

8cm

_____

_____
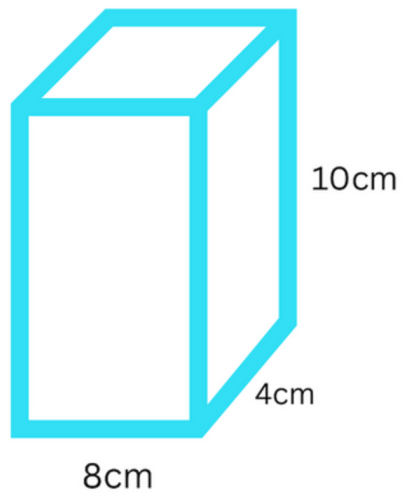
_____

_____

10

Prepare 4 GCSEs

21   Here is a cuboid.

[2 marks]

10cm

4cm

8cm

Work out the volume.

_____

_____

_____

_____

22   A school surveyed students on the number of books they read over the summer. The results are grouped as follows:

Number of books	Frequency
$0 < x \leq 2$	5
$2 < x \leq 4$	12
$4 < x \leq 6$	18
$6 < x \leq 8$	8

a)Calculate the estimated mean number of books read.

[3 marks]

Answer _____

Turn over for the next question

5

Turn over ▶

Prepare 4 GCSEs

22 b) modal class [1 mark]

22 c) Identify the class interval in which the median lies. [1 mark]

22 b) modal class

23   Work out the value of $(4^{10} \div 4^{4}) \div (4^{4} \times 4)$

[3 marks]

Answer _____

24   Factorise $x^{2} + 9x + 10$

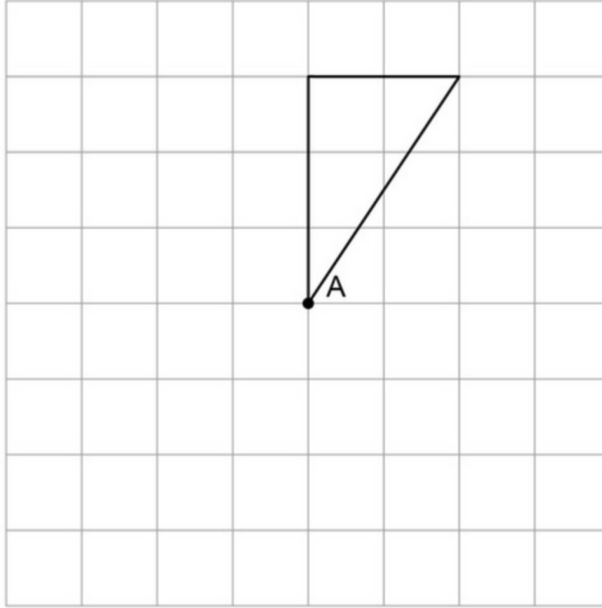[2 marks]

_____

_____

_____

_____

_____

Answer _____

7

Turn over ▶

Prepare 4 GCSEs

25   Complete the diagram so that it has

rotational symmetry of order 4

centre of rotation at point A.
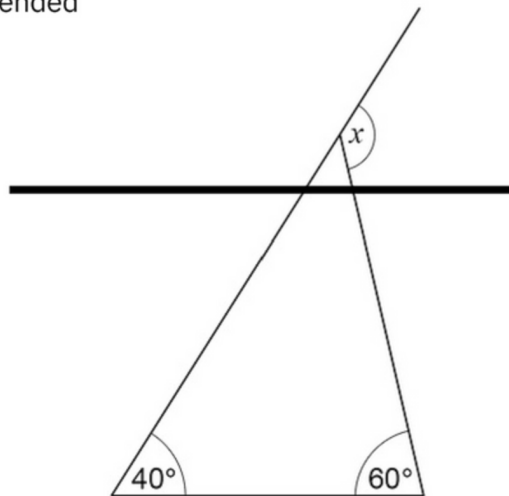
[2 marks]

26   Work out $(-9) \times 9$

[1 mark]

Answer

27   Rearrange 3x = 4y +5 to make y the subject.

[2 marks]

_____

_____

_____

_____

_____

Answer _____

28   One side of a triangle is extended

Circle the size of angle x.

100°   80°   60°   40°   [1 mark]

Turn over for the next question

6

Turn over ▶

Prepare 4 GCSEs

29   The cost of a bike is £500.

[4 marks]

Bob pays a deposit followed by monthly payments, in the ratio

deposit : total of the monthly payments = 3 : 5.

He makes 5 equal monthly payments. Work out his monthly payment.

END OF QUESTIONS

4

Prepare 4 GCSEs