AQA

Please write clearly in block capitals.

Centre number ☐☐☐☐☐ Candidate number ☐☐☐☐

Surname _____

Forename(s) _____

Candidate signature _____

I declare this is my own work.

GCSE MATHEMATICS

Foundation Tier Paper 1 Non-Calculator

For Examiner's Use	
Pages	**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	
TOTAL	

F

PREDICTED PAPER — PAPER 1 (FOUNDATION)

Time allowed: 1 hour 30 minutes

Materials

For this paper you must have:

- mathematical instruments
- the Formulae Sheet (enclosed).

You must not use a calculator.

Instructions

- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Fill in the boxes at the top 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.
- If you need extra space for your answer(s), use the lined pages at the end of this book. Write the question number against your answer(s).
- 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.

Answer all questions in the spaces provided.

1 (a) Write down the value of 6^2 **[1 mark]**

Answer _____

1 (b) Work out $7.8 + 2.45 - 1.6$ **[2 marks]**

Answer _____

2 Write the number forty-five thousand, three hundred and twelve in figures. **[1 mark]**

Answer _____

3 (a) Write $\frac{9}{4}$ as a mixed number. **[1 mark]**

Answer _____

3 (b) Work out $\frac{2}{5} + \frac{1}{5}$ **[1 mark]**

Answer _____

4 (a) Write down all the factors of 24. **[2 marks]**

.....

.....

Answer _____

4 (b) Tom says, “The square of any whole number is always odd.” Is he correct? Give a reason for your answer. **[1 mark]**

.....

.....

5 Put these values in order of size, starting with the smallest. **[2 marks]**

70% 0.65 $\frac{3}{4}$ 0.8

Answer _____ _____ _____ _____

6 Tia buys 4 cakes and 2 drinks. The total cost is £8.40. Each drink costs £1.20.

Work out the cost of one cake. **[4 marks]**

Answer £ _____

7 200 students take part in a charity run. 80 are boys, the rest are girls. 50 boys complete the run. In total, 150 students complete the run.

7 (a) Complete the frequency tree. **[3 marks]**

[Frequency tree:
*200 → branches to **Boys (80)** and **Girls (___)***
*Boys (80) → branches to **Complete (50)** and **Did not complete (___)***
*Girls (?) → branches to **Complete (___)** and **Did not complete (___)**]*

7 (b) What fraction of the girls completed the run? Give your answer in its simplest form. **[2 marks]**

Answer _____

8 (a) Simplify fully 6a + 3b − 2a + 4b **[2 marks]**

Answer _____

8 (b) Factorise 4x + 12 **[1 mark]**

Answer _____

8 (c) Multiply out 3(2y − 5) **[2 marks]**

Answer _____

9 A train leaves the station at 13:48. The journey takes 2 hours 35 minutes.

At what time does the train arrive? **[2 marks]**

Answer _____

10 A regular octagon has perimeter 96 cm.

Work out the length of one side. **[2 marks]**

Answer _____ cm

11 Last week, Sam worked for 7 hours and earned £56. This week, Sam works for 11 hours at the same hourly rate.

11 (a) How much will Sam earn this week? **[3 marks]**

Answer £ _____

11 (b) The hourly rate then increases by £2 per hour.

How much would Sam earn for 11 hours at the new rate? **[2 marks]**

Answer £ _____

12 Complete the list of six numbers so that: the mode is 7, the median is 10, the range is 14. **[3 marks]**

[_ _] 7 [_ _] [_ _] 1 6
[_ _]

13 On the grid, draw the graph of $y = 2x - 3$ for values of x from −2 to 4. **[3 marks]**

[Coordinate grid: x from −3 to 5, y from −10 to 10, 1 cm squares]

14 Work out $\frac{3}{5} + \frac{1}{4}$

Give your answer as a fraction in its simplest form. **[3 marks]**

Answer _____

15 On a coordinate grid, triangle T has vertices at (2, 1), (2, 5) and (4, 1).

15 (a) Triangle T is reflected in the y-axis. Write down the coordinates of the image of (4, 1). **[1 mark]**

Answer (___ , _____)

15 (b) Write down the equation of the y-axis. **[1 mark]**

Answer _____

16 A bag contains red, blue and yellow counters in the ratio 3 : 4 : 5. There are 60 counters in total.

How many more yellow counters are there than red counters? **[3 marks]**

Answer _____

17 Work out √(49 + 51) **[2 marks]**

Answer _____

18 P(A) means the probability of event A happening. What does P(A') represent? Circle your answer. **[1 mark]**

A happening A not happening Both A and B Either A or B

19 Work out $(2^3 \times 2^4) \div 2^5$

Give your answer as a single power of 2. **[2 marks]**

Answer _____

20 Write down the equation of a line parallel to $y = 4x - 1$ **[1 mark]**

Answer _____

21 Write down the value of sin 90° **[1 mark]**

Answer _____

22 40% of a number is 100.

Work out 75% of the same number. **[3 marks]**

Answer _____

23 A scatter graph shows negative correlation between two variables.

Describe what negative correlation means. **[1 mark]**

24 Solve $4x - 5 = 19$ **[2 marks]**

$x =$ _____

25 A circle has radius 8 cm.

Work out the area of the circle. Give your answer in terms of π. **[2 marks]**

Answer _____ cm^2

26 Here are the first four terms of a sequence:

5 , 9 , 13 , 17 , . . .

Find an expression for the nth term. **[2 marks]**

Answer _____

27 Write 38 000 in standard form. **[1 mark]**

Answer _____

28 A right-angled triangle has a base of 6 cm and a height of 8 cm.

Use Pythagoras' theorem to work out the length of the hypotenuse. **[3 marks]**

Answer _____ cm

END OF QUESTIONS