

GCSE Maths (Non-Calculator) Practice Foundation Paper 1

AQA Specification

Types of marks:

- M method marks
 A accuracy marks
 B unconditional accuracy marks
 (independent of M marks)

Abbreviations:

- cao cannot accept other
 ft follow through
 oe or equivalent

No working:

If no working is shown, then correct answers score full marks and incorrect answers score no marks.

Other:

If the correct answer has **clearly** been obtained from incorrect working, award zero marks.

1.		1 mark
	C	1 mark
2.		1 mark
	B	1 mark
3.		1 mark
	A	1 mark
4.		3 marks total
a.	A1 15 (ml) cao	1 mark
b.	M1 $3 = \frac{6a}{4}$ A1 $a = 2$ (months) oe	2 marks
5.		3 marks total
	A1 rotation/rotated A1 90° anti-clockwise or 270° clockwise A1 about/centre (0, 0)	3 marks
6.		3 marks total
	M1 Rounding all numbers to 1 significant figure. $\frac{400 \times 10}{0.5}$ dM1 Correctly multiplying $400 \times 10 = 4000$ A1 8000 cao	3 marks



7.		3 marks total
a.	M1 Attempt to add 1 to both sides. $4x \geq 10$ A1 $x \geq \frac{5}{2}$ oe	2 marks
b.	M1 3 ft	1 mark
8.		5 marks total
a.	M1 $35 - 15$ A1 20	2 marks
b.	M1 Suitable scale on both axes. M1 Fully labelled axes. M1 Correctly drawn diagram, e.g. bar chart, time series graph.	3 marks
9.		6 marks total
a.	M1 for attempt to change both denominators to a multiple of 5 and 4. $\frac{12}{20} + \frac{5}{20}$ dA1 $\frac{17}{20}$ and no, he is incorrect.	2 marks
b.	M1 One or both fractions converted into improper fractions. $\frac{8}{3} \times \frac{7}{4}$ M1 for either $\frac{56}{12}$ or cross-cancelling to get $\frac{2}{3} \times \frac{7}{1}$ A1 $4\frac{2}{3}$ cao	3 marks
c.	A1 20 cao	1 mark
10.		6 marks total
a.i.	M1 for $360 - (110 + 50 + 90)$ A1 110°	2 marks
ii.	“Angles around a point add to 360° .” Note: “Angles around a point” is not sufficient enough to gain this mark, reference must be made to the fact they sum to 360° . Do not accept “Angles in a circle”.	1 mark
b.	M1 $2y + y + 48 (= 180)$ or $3y + 48 = 180$ M1 Attempt to subtract 48 from both sides $3y = 132$ A1 44° cao	3 marks



11.		3 marks total
	M1 Attempt to calculate 415×12 with no more than one error. M1 Dividing their "4980" by 1000 A1 4.98kg cao	3 marks
12.		4 marks total
a.	A1 Fully correct coordinates plotted at (8, 3000) and (3, 7500)	1 mark
b.	A1 Either "Negative correlation" or "As the car gets older its value decreases" oe Do not accept "negative"	1 mark
c.	M1 Correct line of best fit. A1 Between £4000–£5000	2 marks
13.		2 marks total
	A2 $(x + 7)(x - 3)$ [A1 $(x \pm 7)(x \pm 3)$]	2 marks
14.		4 marks total
a.	M1 Correctly converting all numbers to decimal or percentage form. 0.31, 0.4, 0.28, 0.25 31%, 40%, 28%, 25% A1 for $\frac{1}{4}$, 28%, 0.31, $\frac{2}{5}$ oe	2 marks
b.	M1 Correctly converting all numbers into the same form. $\frac{1}{5} = 20\%$ and $\frac{3}{10} = 30\%$ or $100 - (20 + 30 + 24)$ oe dA1 for 26%	2 marks
15.		2 marks total
	M1 $\frac{6}{4}$ or 1.5 or $15 \div 1.5$ A1 10cm cao	2 marks



16.		4 marks total
a.	M1 $3n$ A1 $3n + 5$	2 marks
b.	M1 $3n + 5 = 753$ A1 $n = \frac{748}{3}$ and a suitable explanation that 3 is not a factor of 748 therefore she is incorrect.	2 marks
17.		2 marks total
	A2 for $4x + 8$ [A1 for expression $x + 4$ seen in absence of correct answer.]	2 marks
18.		2 marks total
	M1 $4.5 \div \frac{1}{3}$ or 4.5×3 [= 13.5 km/h] or 0.225 km/minute and 0.23km/minute seen dA1 Robert with fully correct working	2 marks
19.		3 marks total
	M1 $\cos(60^\circ) = \frac{1}{2}$ M1 $9 \times \frac{1}{2}$ A1 4.5cm cao	3 marks
20.		3 marks total
	M1 $y + 4$ or $2y$ M1 $y + y + 4 + 2y = 32$ or $4y + 4 = 32$ A1 Alex is 7, Bella is 11 and Carla is 14.	3 marks
21.		3 marks total
	M1 8×8 or 64 M1 $4^2 \times \pi$ or 16π A1 $(64 - 16\pi)\text{cm}^2$ oe	3 marks
22.		3 marks total
	M1 $1 - \frac{2}{5}$ [= $\frac{3}{5}$] M1 for $\frac{3}{5} \div 7 = \frac{3}{35}$ oe and attempt to multiply by 4 or $\frac{3}{5} \times \frac{4}{7}$ A1 for $\frac{12}{35}$ oe	3 marks



23.		3 marks total
	<p>M1 for attempt to find the gradient of the line between (30, 20) and (60, 60)</p> <p>M1 for changing time into hours</p> $\frac{60 - 20}{1 - \frac{1}{2}}$ <p>A1 80mph cao</p>	3 marks
24.		3 marks total
	<p>M1 $8 = 2^3$ or $8^4 = (2^3)^4$ or $8^4 = 2^{12}$ or $\frac{1}{2} = 2^{-1}$</p> <p>M1 $12 + x = -1$ or fully correct attempt to rearrange equation to make $2x$ the subject</p> <p>A1 $x = -13$</p>	3 marks
25.		3 marks total
	<p>M1 $8 \times 43 [= 344]$ or $18 \times 37 [= 666]$</p> <p>M1 "666" – "344" [322] and attempt to divide by 10.</p> <p>A1 32.2 seconds cao</p>	3 marks
26.		4 marks total
	<p>M1 $x + y = 42$ or $4x + 2y = 114$ oe</p> <p>M1 Attempt to multiply one or both equations to create a common coefficient</p> <p>M1 Fully correct method to calculate the value of $x = 15$ or $y = 27$ and attempt to substitute their x or y into one of the original equations.</p> <p>A1 goats = 15 and ducks = 27</p>	4 marks

