

GCSE MATHEMATICS
MARK SCHEME – Specimen paper (Linear) Foundation Paper 1

Questions	Working	Answer	Mark	Notes
1 (a) (i) (ii) (b)		(3, 3) (1, 0) Midpoint marked at $(2, 1\frac{1}{2})$	1 1 1	B1 cao B1 cao B1 allow 2 mm tolerance from $(2, 1\frac{1}{2})$
2		260, 254	1	A1 cao
3 (a) (b) (c)		7 7 4.5	2 1 1	M1 Ordering: 6677888 A1 cao B1 cao B1 Accept 4.3 – 4.7
4 (a) (b) (c) (d) (e) (i) (ii)		Jan, Feb, Mar Allium May and June Daffodil $1\frac{1}{5}$ X marked on line at $3\frac{3}{5}$	1 1 1 1 1 1	B1 cao B1 cao B1 cao B1 cao B1 for $\frac{1}{5}$ oe B1 for cross between $\frac{1}{2}$ and $\frac{3}{4}$
5 (a) (b) (c)		13 591 Thousands, 1000, 7000 8200	1 1 1	B1 cao B1 cao B1 cao

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6		millilitres, ml, cm ³ cc centimetres, cm grams, g 8000	3	B1 oe B1 oe B1 oe B1 oe
(b)		8000	1	
7		25, 32 32 or 80 9, 25 or 49 factor 18 11 or 88 69	1 2 1 3	B1 for both B1 accept both B1 accept any amount of correct answers B1 Could be indicated in the box. B1 cao B1 accept both B1 cao
(a)			1	
(b)			2	
(c)			1	
(d)			3	
(iii)				





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8	$\begin{array}{r} 437 \\ 24 \\ \hline 1748 \\ 8740 \\ \hline 10488 \end{array}$ <p style="text-align: center;">or</p> $\begin{array}{r} 24 \\ 437 \\ \hline 168 \\ 720 \\ \hline 9600 \\ 10488 \end{array}$ <p style="text-align: center;">or</p>	10488	3	M2 for complete method, allow one arithmetic error (M1 for complete method, allow two arithmetic errors) A1 cao
9	<p>(a)</p> $2.40 + 0.40$ <p>(b)</p>	<p>1.60</p> <p>2.80</p>	<p>1</p> <p>2</p>	<p>B1 cao, could be indicated on the diagram</p> <p>M1 2.40 + 0.40 or 0.08 × 35 or 0.80 × 3.5 or valid method</p> <p>A1 cao</p> <p>SC B1 for 280, with or without working</p>

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10		17, 83, 91, 109, 140 -8, -4, -2, 1, 4 $0.6, \frac{2}{3}, 70\%, \frac{3}{4}$	1 1 2	B1 cao B1 cao B1 cao
11		Octagon $135 + 135 + 90 = 360$ Sum of angles at a point is 360°	1 2	B1 accept alternatives (recognisable) spelling B1 for 360 or (1080) seen
(c)	$10 \times 4 + 5 \times 4$	60	2	B1 for “point”, “complete turn” or “a circle” or similar unless accompanied by an incorrect angle SC: if neither B1 scored, award B1 for a clear indication that the size of the angle other than x , is 90° or a right angle (may be on diagram) M1 for $10 \times 4 + 5 \times 4$ or attempt to sum 7 or 8 lengths A1 cao
12		$\frac{3}{5}$	1	B2 cao (B1 for $\frac{60}{100}$ or $\frac{30}{50}$ or $\frac{15}{25}$ or $\frac{12}{20}$ or $\frac{6}{10}$) SC B1 for 0.6
(b)		45	1	B1 cao

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13 (a)	France  5 Spain  7 Italy  4 England  4		4	M1 for attempt to tally A1 for 1 frequency correct or all tallies correct A1 for all frequencies correct (accept if /20) B1 for correct total
14 (a)		1710	1	B1 accept 5 10pm. Do not accept 510
(b) (i)	83.40 ÷ 10	8.34(0)	2	M1 for 83.4 ÷ 10 oe A1 cao
(ii)		9	1	B1 ft from “8.34” unless whole number of pounds
15 (a)		6	2	B2 for 6 cao (B1 for 5.5 < area ≤ 7)
(b)	See diagram	correct shape	2	B2 (B1 for any 2 sides correct, with a minimum of five sides, or a correct enlargement scale factor ≠ 1 or 2)
16		13 17 13 8 25	2	B2 All correct (B1 for 2 correct)
17 (a)		$5p + 7q$	2	B2 for $5p + 7q$ (accept $5 \times p$ etc) (B1 for $5p$ or $7q$ seen)
(b)		$3x + 5y$	2	B2 for $3x + 5y$ (accept $3 \times x$ etc) (B1 for $3x$ or $5y$)
(c)		$3w^2$	1	B1 accept $3 \times w^2$ or $3 \times w \times w$
18	$80 \times \frac{4}{5}$	64	2	M1 80×4 or 320 seen or $80 \div 5$ or 16 seen A1 cao

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19 (a) (i) (ii) (b)	 "60" + 90	60 eg left triangle is equilateral 150	2 2	B1 cao B1 for reason M1 for $\frac{180 - "60"}{2} + 90$
20 (a) (b)	$(4 + 3) \times 1000$ $(? + 3) \times 1000 = 12\ 000$ or $12\ 000 \div 1000$	7000 9	2 2	A1 ft from a(i) if $x < 90$ SC: B1 for answer from "60" + 90 if $x < 90$ M1 $(4 + 3) \times 1000$ A1 cao M1 e.g for $\frac{12000}{1000}$ or 12 seen A1 cao
21	$9 + 6 + 15 + 12 = 42$	2.1	3	M1 for completing third column or showing goals \times frequency B1 for $42 \div 20$ A1 cao
22		Correct drawing	2	B2 for correct 3-D space Condone hidden detail shown with solid lines. (B1 for 1 sketch correct with other sketches incorrect cross-section correct with depths > 1 cube correct plan and side elevation)

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23 (a) (b) (c)		Points plotted Positive 22 < answer < 32	1 1 2	B1 ± 1 full mark (2 mm square) B1 cao B2 ft from a single line segment with positive gradient ± 1 full (2 mm) square [B1 lobj must pass through (5, 5) (5, 15) and (55, 35) and (55, 45)]
24 (a)	eg $100 \times \frac{2500}{1000}$	250	2	M1 $\frac{2500}{1000}$ oe seen or 100 + 100 + 50 A1 cao
(b)	eg $800 \times \frac{1500}{1000}$	1200	2	M1 $\frac{1500}{1000}$ oe seen or 800 + 400 A1 cao
25		question + response boxes oe	2	1 st aspect: one question with time period (eg each day); ignore other questions 2 nd aspect: response list (at least two), no overlapping 3 rd aspect: some mention of units (eg hours or number of pieces) in either question or responses Award B2 for all these aspects, or B1 for just two aspects
26 (i) (ii)		7 ⁷ 7 ⁶	2	B1 accept 7 ³⁺⁴ , 823543 B1 accept 7 ¹¹⁻⁵ , 117649

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27 (a)	$9 - 2x = 3x + 6$ $9 - 6 = 3x + 2x$ $3 = 5x$	$\frac{3}{5}$	3	B1 for $3x + 6$ seen OR $3 - \frac{2}{3}x = x + 2$ M1 for correct rearrangement of 4 terms or $3 = 5x$ A1 for $\frac{3}{5}$ oe
(b)		$-3, -2, -1, 0, 1$	2	B2 (B1 for 4 correct integers OR not more than one incorrect integer or omissions)
28	$(4 \times 3) \times 11 \div 2$	66cm^3	4	M2 for $4 \times 3 \times 11 \div 2$ (M1 for any three of these) A1 cao numerical answer of 66 B1 (indep) cm^3 with or without any numerical answer