

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

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

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





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

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<b>10</b> (a)		17, 83, 91, 109, 140 – 8, – 4, – 2, 1, 4	<b>1</b>	B1 cao
(b)		$0.6, \frac{2}{3}, 70\%, \frac{3}{4}$	<b>1</b>	B1 cao
(c)			<b>2</b>	B1 cao
<b>11</b> (a)		Octagon	<b>1</b>	B1 accept alternatives (recognisable) spelling
(b)		$135 + 135 + 90 = 360$ Sum of angles at a point is $360^\circ$	<b>2</b>	B1 for 360 or (1080) seen  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 $90^\circ$ or a right angle (may be on diagram)
(c)	$10 \times 4 + 5 \times 4$	60	<b>2</b>	M1 for $10 \times 4 + 5 \times 4$ or attempt to sum 7 or 8 lengths A1 cao
<b>12</b> (a)	$\frac{60}{100}$	$\frac{3}{5}$	<b>1</b>	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	<b>1</b>	B1 cao

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

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<b>19</b> (a) (i) (ii)  (b)	  “60” + 90	60 eg left triangle is equilateral  150	<b>2</b>   <b>2</b>	B1 cao B1 for reason  M1 for $\frac{180 - "60"}{2} + 90$  A1 ft from a(i) if $x < 90$ SC: B1 for answer from “60” + 90 if $x < 90$
<b>20</b> (a)  (b)	$(4 + 3) \times 1000$  $(? + 3) \times 1000 = 12\ 000$ or $12\ 000 \div 1000$	7000  9	<b>2</b>  <b>2</b>	M1 $(4 + 3) \times 1000$ A1 cao  M1 e.g for $\frac{12000}{1000}$ or 12 seen A1 cao
<b>21</b>	$9 + 6 + 15 + 12 = 42$	2.1	<b>3</b>	M1 for completing third column or showing goals $\times$ frequency B1 for $42 \div 20$ A1 cao
<b>22</b>		Correct drawing	<b>2</b>	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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<b>23</b> (a) (b) (c)		Points plotted Positive $22 < \text{answer} < 32$	<b>1</b> <b>1</b> <b>2</b>	B1 $\pm 1$ full mark (2 mm square) B1 cao B2 ft from a single line segment with positive gradient $\pm 1$ full (2 mm) square [B1 lobf must pass through (5, 5) (5, 15) and (55, 35) and (55, 45)]
<b>24</b> (a)  (b)	eg $100 \times \frac{2500}{1000}$  eg $800 \times \frac{1500}{1000}$	250  1200	<b>2</b>  <b>2</b>	M1 $\frac{2500}{1000}$ oe seen or $100 + 100 + 50$ A1 cao M1 $\frac{1500}{1000}$ oe seen or $800 + 400$ A1 cao
<b>25</b>		question + response boxes oe	<b>2</b>	1 <sup>st</sup> aspect: one question with time period (eg each day); ignore other questions 2 <sup>nd</sup> aspect: response list (at least two), no overlapping 3 <sup>rd</sup> 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
<b>26</b> (i) (ii)		$7^7$ $7^6$	<b>2</b>	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	$(4 \times 3) \times 11 \div 2$	$66\text{cm}^3$	4	M2 for $4 \times 3 \times 11 \div 2$ (M1 for any three of these) A1 cao numerical answer of 66 B1 (indep) $\text{cm}^3$ with or without any numerical answer