Cambridge Assessment International Education

Mathematics

Stage 8

Paper 2

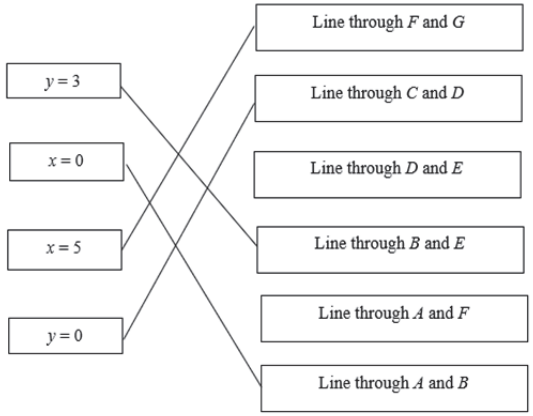
2024

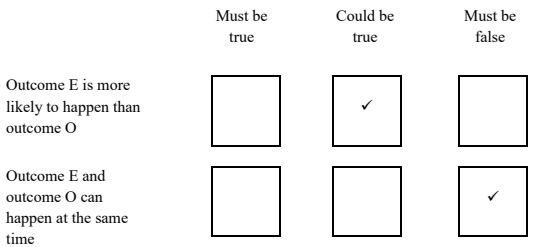
Cambridge Lower Secondary Progression Test

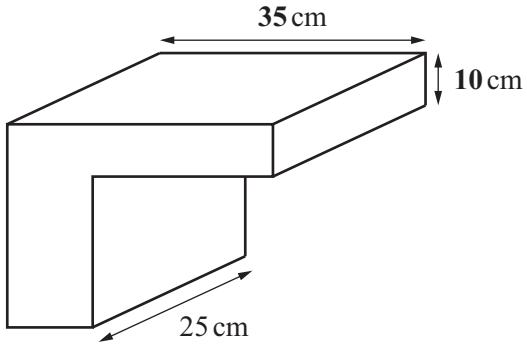
Mark Scheme

3142_02_MS_6RP

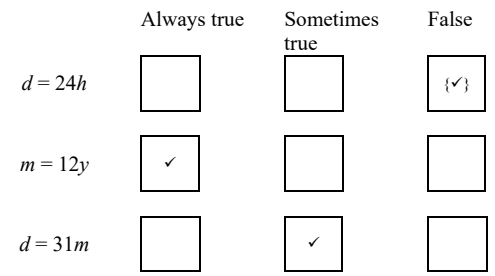
Question	Answer	Marks	Part Marks	Guidance
1	$5x^2 + 20x$	**1**		
2	34	**2**	Award 1 mark for $238 \div (3 + 9 + 2)$ or better.	Or better, e.g. $238 \div 14$, 17, $\frac{2}{3+9+2} \times 238$
3	$(x =)$ 7	**1**		
4	10 cm	**1**		Accept any clear indication.
5	13 and –13	**1**		Accept ±13 with no incorrect answers.
6	0.95	**1**		Accept equivalent fractions and percentage.
7	$(x =)\ 2m - y$	**2**	Award 1 mark for correct first step, e.g. $2m = x + y$ **or** $m - \frac{y}{2} = \frac{x}{2}$	
8	$6x + 18$ **or** $6(x + 3)$ (cm)	**2**	Award 1 mark for a correct expression not in its simplest form, e.g. $x + 3 + x + 3 + 2(x + 3) + 2(x + 3)$ **or** final answer $6x + k$	
9	312 (cm^2)	**2**	Award 1 mark for $\frac{1}{2} \times 12 \times 7$ [× 4] or equivalent **or** 12×12 or equivalent	Implied by 42, 168 or 144 seen.

Question	Answer	Marks	Part Marks	Guidance
10(a)	Set D	**1**		Accept any clear indication.
10(b)(i)	<table><tr><td></td><td></td><td colspan="3">**(Set C)**</td></tr><tr><td></td><td>+</td><td>**(1)**</td><td>**1**</td><td>**2**</td></tr><tr><td rowspan="4">**(Set A)**</td><td>**(1)**</td><td>2</td><td>2</td><td>3</td></tr><tr><td>**(2)**</td><td>3</td><td>3</td><td>4</td></tr><tr><td>**(3)**</td><td>(4)</td><td>4</td><td>5</td></tr><tr><td>**(4)**</td><td>5</td><td>5</td><td>6</td></tr></table>	**2**	Award 1 mark for **eight** or more correct entries.	For 1 or 2 marks, accept the columns in either order.
10(b)(ii)	$\frac{3}{12}$ or equivalent	**1**	Follow through from *their* completed table in part **(b)(i)**.	Accept equivalent percentage, decimal or fractions.
11(a)		**2**	Award 1 mark for **two** or **three** correct lines.	
11(b)	$y = x$	**1**		

Question	Answer	Marks	Part Marks	Guidance
12		1		Both answers correct for the mark. Accept any clear indication.

Question	Answer	Marks	Part Marks	Guidance
13		**2**	Award 1 mark for recognition of scale 1 square = 5 cm implied by one correct answer.	
14	**Input (x)** / **Output (y)** (–10) / **–35** **4** / (7)	**2**	Award 1 mark for each correct answer.	
15(a)	A correct reason, e.g. The sample does not contain the same proportion of adults and children as the population.	**1**		Accept equivalent statements implying the proportions are wrong, e.g. There are too many children in the sample (as there are only 50 in the population). Do **not** accept 'Not representative of the population' alone.
15(b)	A correct reason, e.g. • She can explain any questions that are not understood. • She is more likely to get a response.	**1**		Accept any correct reason in favour of an interview over a questionnaire.

Question	Answer	Marks	Part Marks	Guidance
16	5 : 4 : 3	**2**	Award 1 mark for an equivalent ratio not in its simplest form, e.g. $\frac{5}{12} : \frac{1}{3} : \frac{1}{4}$ **or** $\frac{4}{12}$ **and** $\frac{3}{12}$ seen.	
17	21.7 (cm) **or** 21.70 to 21.72 (cm)	**2**	Award 1 mark for 136.4 ÷ π or better.	Accept values of π between 3.14 and $\frac{22}{7}$ Accept 22 for 2 marks with correct working or more accurate answer seen. 1 mark implied by 43 or 43.4… or 22
18(a)	$\begin{pmatrix} 0 \\ 3 \end{pmatrix}$	**1**		
18(b)	$\begin{pmatrix} 25 \\ -40 \end{pmatrix}$	**1**		
18(c)	(7, 4)	**1**		
19	310 000 correct answer only 0.0390 correct answer only	**2**	Award 1 mark for each correct answer.	Do **not** accept 0.039
20(a)	1.04 100	**2**	Award 1 mark for each correct answer.	
20(b)	–450	**1**		Do **not** accept 450

Question	Answer	Marks	Part Marks	Guidance
21		**1**		Both answers correct for the mark. Accept any clear indication.
22	(red) $\frac{27}{47}$ correct answer only (even) $\frac{23}{47}$ correct answer only	**2**	Award 1 mark for one correct **or** for both given as decimals correct to 2dp or better, e.g. 0.57446... **and** 0.48936...	
23	(x =) 6.5	**3**	Award 1 mark for $20x + 15 = 97 - 4 + 8x$ with at most one term incorrect or better. **and** Award 1 mark for correctly collecting *their* letters on one side and *their* numbers on the other, i.e. $20x - 8x = 97 - 4 - 15$	Accept $\frac{13}{2}$ or equivalent for 3 marks. Or better, e.g. $12x = 78$

Question	Answer	Marks	Part Marks	Guidance
24	$\frac{2}{3}$ correct answer only	**4**	Award 3 marks for correct fraction not in its simplest form, e.g. $\frac{52}{78}$, $\frac{5\frac{1}{3}}{8}$ **or** Award 2 marks for $\frac{1}{2} \times 6 \times 3.25 \times 8$ or 78 **or** $4 \times 5 \times 2.6 \div (\frac{1}{2} \times 6 \times 3.25)$ or $5\frac{1}{3}$ **or** Award 1 mark for any of these seen • $4 \times 5 \times 2.6$ or 52 • $\frac{1}{2} \times 6 \times 3.25$ or 9.75 • $6 \times 3.25 \times 8$ or 156	
25	less than **and** 12	**1**		Both answers in the correct order for the mark.