Cambridge Assessment International Education

Mathematics

Stage 7

Paper 2

2022

Cambridge Lower Secondary Progression Test

Mark Scheme

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3141_02_MS_6RP
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Question	Answer	Marks	Part Marks	Guidance
1	$\frac{2}{5}$	**1**		Accept 0.4 **or** 40% Do **not** accept in ratio **or** in words, e.g. 2 : 5 **or** 2 in 5
2	9	**2**	Award 1 mark for correctly listing the factors of 36 (1, 2, 3, 4, 6, 9, 12, 18, 36) **or** 63 (1, 3, 7, 9, 21, 63) Accept **two** omissions. **or** Award 1 mark for answer 3	Award 1 mark for correct prime factors of 36 ($2 \times 2 \times 3 \times 3$) **or** 63 ($3 \times 3 \times 7$)
3(a)	$\frac{x}{2}$	**1**		Accept $\frac{1}{2}x$ **or** $x \div 2$
3(b)	$x + 3$	**1**		
4	similar	**1**		Accept any clear indication.
5	14.8	**1**		Accept $14\frac{4}{5}$
6	86.4 **or** 86.36 … (%)	**2**	Award 1 mark for $\frac{220 - 30}{220}$ ($\times 100$) or equivalent. **or** Award 1 mark for 13.6 **or** 13.63 to 13.64	

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Question	Answer	Marks	Part Marks	Guidance
7	($)2.55	**1**		
8(a)	15.18	**1**		
8(b)	34.0	**2**	Award 1 mark for 33.9 **or** 33.96 to 33.97 **or** Award 1 mark for answer 34	
9(a)	$4b + 6$ (cm)	**2**	Award 1 mark for $8 + 8 + 2b - 5 + 2b - 5$ or equivalent.	Accept 2(2b + 3) for 2 marks.
9(b)	(b =) 9	**2**	Award 1 mark for $4b = 42 - 6$ Follow through *their* linear expression from **(a)**	
10	100 (square millimetres)	**1**		
11(a)	(a =) 115	**1**		
11(b)	(b =) 62	**1**		
12	(His error is) to think there are 100 minutes in one hour or equivalent. **and** 5 (hours) 12 (minutes)	**2**	Award 1 mark for correct description of error **or** for correct time.	For description of error, accept he did **not** use 60 minutes in one hour **or** he did **not** do 0.2×60 **or** he did 0.2×100

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Question	Answer	Marks	Part Marks	Guidance
13	64 **and** 11	**1**		Both answers correct for the mark. Accept – 11
14(a)	pod **and** sos	**1**		Accept any clear indication. Both answers correct for the mark.
14(b)	Rhombus	**1**		
15(a)	14 (seconds)	**1**		
15(b)	15 (seconds)	**1**		
15(c)	14.8 **or** 14.78... (seconds)	**2**	Award 1 mark for $13 (\times 1) + 14 \times 10 + 15 \times 5 + 16 \times 7$ **or** 340	Do **not** accept 15 unless more accurate answer is seen.

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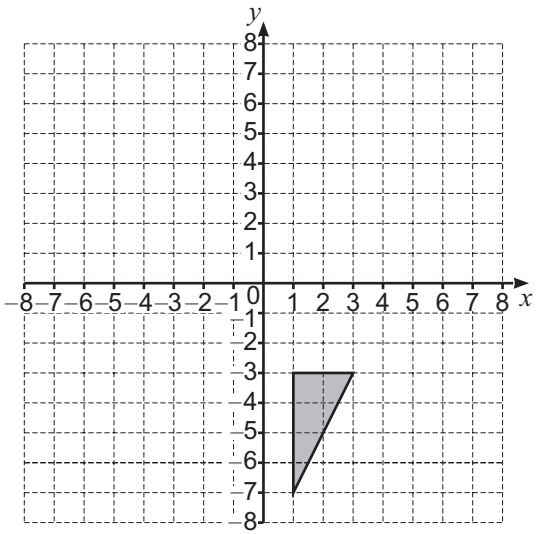
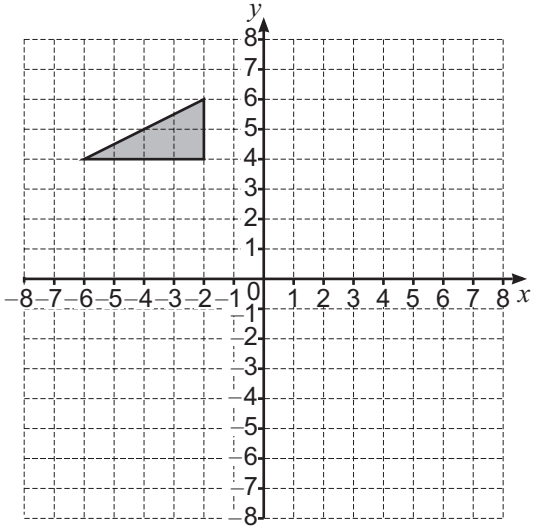
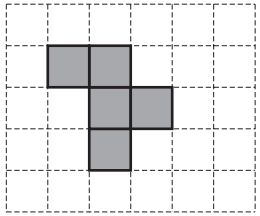
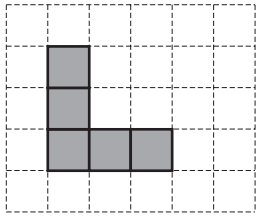
Question	Answer	Marks	Part Marks	Guidance
16(a)		**1**		
16(b)		**2**	Award 1 mark for triangle drawn with correct size and orientation but wrong position **or** for rotation 90° clockwise around (–1, 2).	

Question	Answer	Marks	Part Marks	Guidance
17	$x < 3$	**1**		
18(a)	Any value between 10.132 and 10.133	**1**		e.g. 10.1321
18(b)	Any mixed number between $10\frac{1}{4}$ and $10\frac{3}{8}$	**1**		e.g. $10\frac{5}{16}$
19(a)	$\frac{3}{10}$	**1**		Accept 0.3 **or** 30%
19(b)	Small number of students asked or equivalent.	**1**		Accept any correct answer, e.g. he needs to ask more students **or** he needs a bigger sample.
20(a)		**1**		Accept in any orientation. Accept outline only shown, individual cubes not required.
20(b)		**1**		Accept in any orientation. Accept outline only shown, individual cubes not required.

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Question	Answer	Marks	Part Marks	Guidance
21	($)7740	**3**	Award 2 marks for area = 3000 **or** Award 1 mark for $40 \times 60 + (90 - 60) \times 40 \div 2$ or equivalent correct method for the area **or** for *their* area $\times$ 2.58	Or equivalent, e.g. $\frac{40(90 + 60)}{2}$
22	Median ticked **and** There is no mode. Mean is not representative because of the extreme value (23%).	**2**	Award 1 mark for **one** correct reason for rejecting mode **or** mean.	
23	103 (cm^2)	**3**	Award 1 mark for $70 \div (5 \times 4)$ or equivalent. **or** Award 1 mark for $(4 \times 5) + (\textit{their}\ 3.5 \times 5) + (\textit{their}\ 3.5 \times 4)$ or better or equivalent.	Award this mark for 3.5 1 mark implied by 51.5
24(a)	Yes ticked **and** 99 is one less than a square number.	**1**		Accept equivalents, e.g. yes **and** $10^2 - 1$ 3, 8, 15, 24, 35, 48, 63, 80, 99
24(b)	4	**2**	Award 1 mark for $3 + 8 + 15 + 24 + 35 + 48 + 63$	1 mark implied by 196

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