Cambridge Assessment International Education

Mathematics

Stage 7

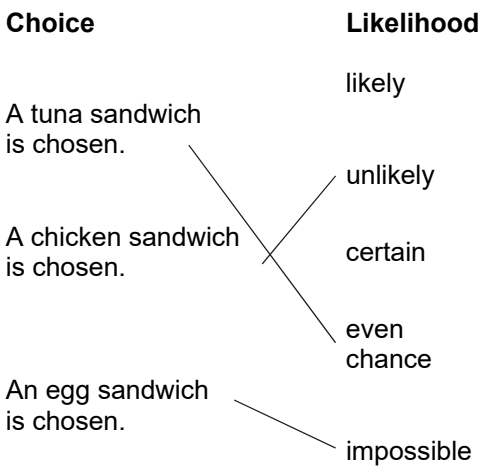
Paper 1

2023

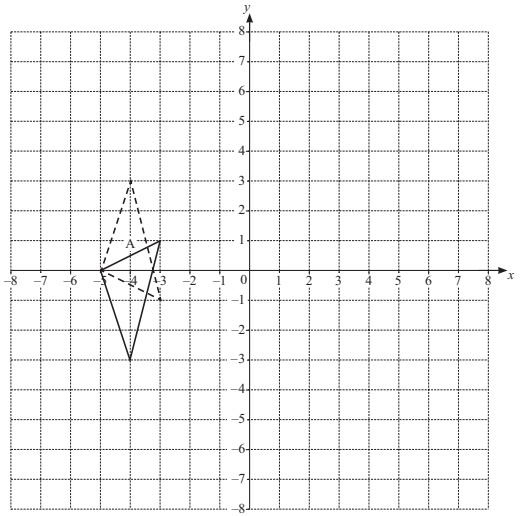
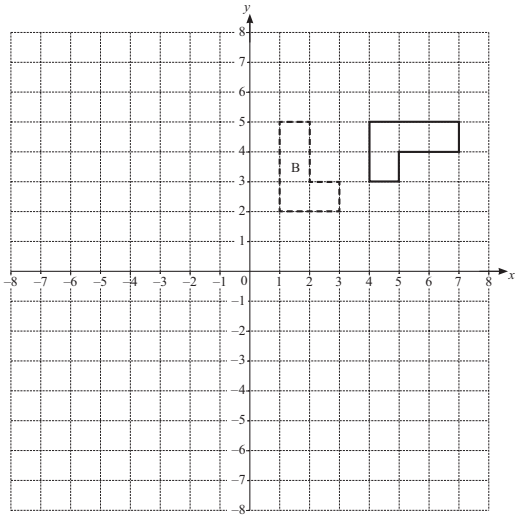
Cambridge Lower Secondary Progression Test

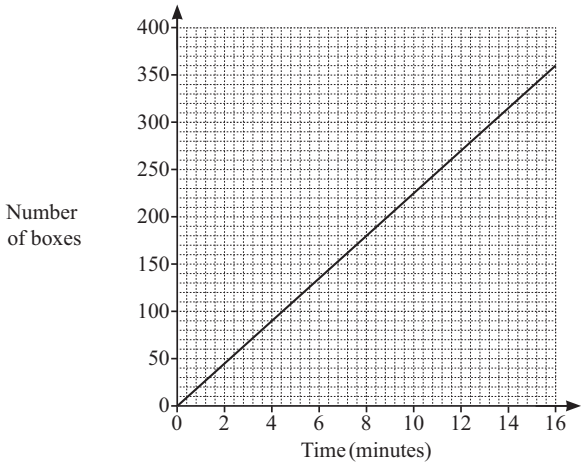
Mark Scheme

Question	Answer	Marks	Part Marks	Guidance
1	0.04	**1**		Accept .04
2	0.08	**1**		Accept .08
3(a)	–16	**1**		
3(b)	17	**1**		
4	5 **and** 15	**1**		Both answers correct for the mark. Accept any clear indication.
5	Perpendicular line to *AB* drawn.	**1**		Accept ± 2°
6	–2 **and** 3 add 5	**2**	Award 1 mark for each correct sentence.	Accept equivalents, e.g. plus 5, + 5
7	scatter graph	**1**		Accept any clear indication.

Question	Answer	Marks	Part Marks	Guidance
8(a)		**2**	Award 1 mark for **two** correct answers.	Accept any clear indication.
8(b)	$\frac{3}{40}$	**1**		Accept equivalent fractions, decimals or percentage.
9	(x =) 140	**1**		
10	A demonstration that the sum of the digits of 14 107 is not divisible by 3 e.g. 1 + 4 + 1 + [0] + 7 = 13 (and 1 + 3 = 4) which is not a multiple of 3	**1**		Do **not** accept a division calculation.
11(a)	24 (cm)	**1**		
11(b)	A correct explanation, e.g. They are not the same size.	**1**		Accept equivalents, e.g. • They are similar but not congruent. • The (corresponding) sides are different lengths.

Question	Answer	Marks	Part Marks	Guidance
12(a)	11	**1**		
12(b)	–3	**1**		Accept any clear indication.
13	Two lines of symmetry (one vertical and one horizontal). Rotational symmetry order 2	**2**	Award 1 mark for two lines of symmetry **or** rotational symmetry order 2	
14	7.25 hours	**1**		Accept any clear indication.
15	(8, –8)	**1**		

Question	Answer	Marks	Part Marks	Guidance
16(a)		**1**		
16(b)		**2**	Award 1 mark for shape drawn with correct size and orientation but wrong position **or** for rotation 90° anticlockwise around (4, 2).	

Question	Answer	Marks	Part Marks	Guidance
17	$\frac{42}{63}$ **and** $\frac{44}{66}$	**2**	Award 1 mark for **one** correct answer.	2 marks for **two** correct answers and no extras. Maximum 1 mark if more than **two** answers given.
18	20 : 3	**1**		
19	0.625	**2**	Award 1 mark for 5 ÷ 8 **or** answer 0.62 to 0.63	Accept .625 for 2 marks.
20	A ruled line drawn from (0, 0) to (16, 360), i.e.  	**2**	Award 1 mark for **two** correct plots seen or implied, e.g. (0, 0) and (4, 90) plotted or a short correct line drawn.	Accuracy of line $\pm\frac{1}{2}$ small square at (0, 0) and (16, 360).
21	3.42 (m)	**2**	Award 1 mark for 1.28 **or** for 342 (cm) **or** for 4.7 – *their* (4 × 0.32) correctly evaluated.	

Question	Answer	Marks	Part Marks	Guidance
22(a)	180	**2**	Award 1 mark for correct method to find 60% of 300 e.g. 0.6 × 300 **or** 10% of 300 = 30 then 6 × 30	
22(b)	20 000	**2**	Award 1 mark for recognising 14 000 is $\frac{7}{10}$ of 20 000 e.g. 14 000 = $\frac{7}{10}$ T or better.	Or better, e.g. $\frac{14000}{7} \times 10$
23	$7\frac{5}{12}$	**3**	Award 2 marks for (4) $\frac{8k}{12k}$ + (2) $\frac{9k}{12k}$ **or** (6 +) $\frac{17}{12}$ **or** $\frac{56k}{12k} + \frac{33k}{12k}$ **or** Award 1 mark for attempt to convert to common denominator with one fraction correct (4) $\frac{8k}{12k}$ **or** (2) $\frac{9k}{12k}$ **or** $\frac{56k}{12k}$ **or** $\frac{33k}{12k}$	2 marks implied by $\frac{89}{12}$ or equivalent. Note the same denominator needed for both fractions.
24	8	**2**	Award 1 mark for 3a + 2 – a = 18 or equivalent.	

Question	Answer	Marks	Part Marks	Guidance
25	$\frac{6}{7}$	**2**	Award 1 mark for $\frac{15}{28} \div \frac{5}{8}$ or better.	Or better, e.g. $\frac{15}{28} \times \frac{8}{5}$ 1 mark implied by $\frac{120}{140}$ or equivalent, e.g. $\frac{3}{3.5}$
26	8	**2**	Award 1 mark for $2 \times 20 \times 0.2$ or $2 \times 40 \times 0.1$ **or** 2.73×4 or 0.73×4 or better.	Implied by 10.92 or (–)2.92 Or better, e.g. (2.73 – 0.73)
27	900 (m*l*)	**3**	Award 2 marks for $360 \div (1 - \frac{1}{4} - 35\%)$ or equivalent. **or** Award 1 mark for $\frac{6}{10}$ or equivalent **or** $1 - \frac{1}{4} - 35\%$ or equivalent.	Or equivalent, e.g. $\frac{4}{10} = \frac{360}{x}$ Or equivalent, e.g. $\frac{4}{10}$