Cambridge Secondary 1 Checkpoint

Cambridge International Examinations
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MATHEMATICS **1112/01**

Paper 1 **April 2017**

MARK SCHEME

Maximum Mark: 50

IMPORTANT NOTICE

Mark Schemes have been issued on the basis of **one** copy per Assistant examiner and two copies per Team Leader.

Published
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Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.
Cambridge will not enter into discussions about these mark schemes.

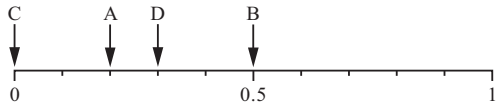
This document consists of **10** printed pages.

Mark scheme annotations and abbreviations

M1	method mark
A1	accuracy mark
B1	independent mark
FT	follow through after error
dep	dependent
oe	or equivalent
cao	correct answer only
isw	ignore subsequent working
soi	seen or implied

Question	Answer	Marks	Further Information
1(a)	63 (°)	**1**	
1(b)	117 (°)	**1**	Follow through: 180 – answer to **(a)**
1(c)	63 (°)	**1**	Follow through: = answer to **(a)** or 180 – **(b)**

Question	Answer	Marks	Further Information
2	$2t$ (or $2 \times t$ or $t \times 2$ or $t + t$) $t - 10$ (Oliver takes) half as long (as Mia)	**3**	
	Two correct answers.	B2	
	One correct answer.	B1	Only award if B2 not awarded.

Question	Answer	Marks	Further Information
3		**2**	
	One labeled arrow correctly placed.	B1	

Question	Answer	Marks	Further Information
4	1.6 m; 132 cm; 1 m 20 cm; 1.15 m; 1 m 6 cm; 86 cm	**1**	

Question	Answer	Marks	Further Information
5(a)	5 **and** 3	**1**	Must be correct order.
5(b)	20 – 24 bar drawn to height 10 **and** 25 – 29 bar drawn to height 5 or *their* height for 25 – 29	**1**	The bars should have gaps between them. Follow through *their* 5
5(c)	Ticks 'Yes' **and** gives a correct explanation e.g. • The modal interval was 15 – 19 on both days. • The tallest bar was 15 – 19 on Mondays and Tuesdays. • Both graphs peaked in the same place.	**1**	Do not accept an explanation that refers to just one graph, e.g. On Tuesdays the most common interval was 15 – 19

Question	Answer	Marks	Further Information
6(a)	$x + 5 = 0$ $\quad$ (circled) $x = 5$ $\quad$ $y = 5$ $\quad$ $y = 5x$	**1**	Accept any clear indication of the answer.
6(b)	$y = 7$ or equivalent	**1**	
6(c)	☑ ☐ ☐ ☑ ☑ ☐	**1**	All correct for 1 mark. Accept any unambiguous indication of the answer.

Question	Answer	Marks	Further Information
7	73	**1**	

Question	Answer	Marks	Further Information
8(a)	0.4	**1**	
8(b)	Any correct integers to make a fraction that lies between $\frac{2}{5}$ and $\frac{1}{2}$ (i.e. between $\frac{40}{100}$ and $\frac{50}{100}$)	**1**	e.g. $\frac{4}{9}, \frac{41}{100}, \frac{3}{7}, \frac{9}{20}, \frac{45}{100}, \frac{7}{15}, \frac{5}{12}$

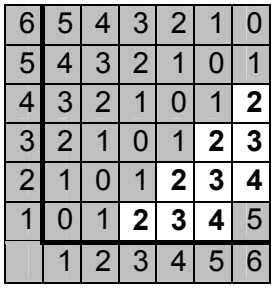
Question	Answer	Marks	Further Information
9	21.676	**1**	

Question	Answer	Marks	Further Information
10(a)	11.316	**1**	
10(b)	2.76	**1**	
10(c)	113.16	**1**	

Question	Answer	Marks	Further Information
11	($) 4.08	**1**	

Question	Answer	Marks	Further Information
12(a)	30 (minutes)	**1**	
12(b)	Safia **and** 12	**1**	
12(c)	The lines for Safia are steeper.	**1**	There must be a comment relating to steepness of the line or speed. Accept 'her line is steeper'. Accept calculations or comparisons of speed.

Question	Answer	Marks	Further Information
13	$x = 3$ $y = 2$	**2**	
	x or y correct **or** $2 \times 2 \times 2 \times 3 \times 3 \times 5$ seen or implied by e.g. tree diagram, repeated division.	B1	

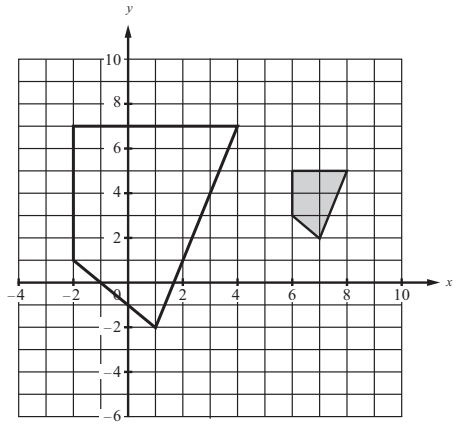
Question	Answer	Marks	Further Information
14		**1**	

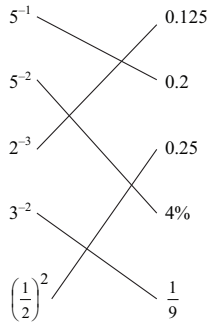
Question	Answer	Marks	Further Information
15(a)	250	**1**	Allow 2.5×10^2
15(b)	2.5	**1**	Allow 2.5×10^0

Question	Answer	Marks	Further Information
16	($)2.96	**2**	
	An answer containing the digits 296 but with an incorrectly positioned decimal point. **or** a complete correct method with at most one numerical error e.g. 1 8 5 × 1 6 1 **0** 1 0 1 8 5 0 2 8 6 0	M1	

Question	Answer	Marks	Further Information
17	(–1, 3)	**2**	
	One correct coordinate **or** correct method for both coordinates **or** (3, –1)	M1	

Question	Answer	Marks	Further Information
18	$\frac{3}{4}$ **and** $\frac{8}{9}$ in correct order	**2**	Allow equivalent fractions.
	One correct fraction.	B1	

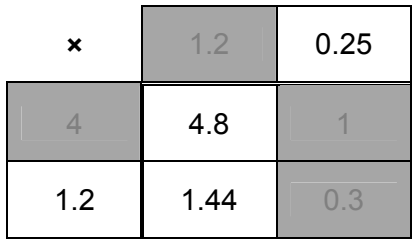
Question	Answer	Marks	Further Information
19		**2**	
	3 coordinates are plotted in correct places **or** the image is the correct size and shape but incorrectly positioned.	B1	

Question	Answer	Marks	Further Information
20		**2**	
	At least three correct.	B1	

Question	Answer	Marks	Further Information
21	7	**3**	
	Complete correct method with at most one arithmetic or conversion error.	M2	
	either for finding that one packet makes 3 litres of paint **or** for calculating that 20 litres of paint requires 4 kg of paint powder sight of $6\frac{2}{3}$ or 6.6… or 6 r4	B2	Only award if M2 not awarded.
	A correct conversion between g / kg or ml / l	B1	Only award if neither M2 nor B2 awarded.

Question	Answer	Marks	Further Information
22(a)	(Reflection in the line) $y = x$	**1**	Do **not** accept just a line on the diagram. Combinations of transformations scores zero
22(b)	90° clockwise or 270° anticlockwise **and** (3,3) **or** 90° anticlockwise or 270° clockwise **and** (6,6)	**2**	Combinations of transformations scores zero.
	Either part correct	B1	

Question	Answer	Marks	Further Information
23	42×0.17 (42 ÷ 0.18) $42 \times \frac{3}{11}$ $(42 \div \frac{5}{8})$	**1**	Both answers needed.

Question	Answer	Marks	Further Information
24		**2**	Allow equivalent fractions.
	Two correct, allowing a follow through if 'their 1.2' × 1.2 is correctly evaluated in place of the 1.44	B1	