Cambridge Checkpoint

Cambridge International Examinations
Cambridge Checkpoint

MATHEMATICS **1112/01**

Paper 1 **For Examination from 2014**

SPECIMEN MARK SCHEME

MAXIMUM MARK: 50

This document consists of **11** printed pages and **1** blank page.

CAMBRIDGE International Examinations

Question	1		
Part	**Mark**	**Answer**	**Further Information**
	1	3 56 (72) 93 146 (198)	
Total	**1**		

Question	2		
Part	**Mark**	**Answer**	**Further Information**
	2	25	Award 1 mark for 20, 15, 35 **or** $\frac{7}{12}$ **or** $\frac{5}{12}$
Total	**2**		

Question	3		
Part	**Mark**	**Answer**	**Further Information**
(a)	2	8 and 29	Award 1 mark for each.
(b)	1	$t = 7p - 6$	
Total	**3**		

Question	4		
Part	**Mark**	**Answer**	**Further Information**
(a)	1	Any two sections with odd numbers and four sections with even numbers.	
(b)	1	$\frac{2}{3}$	Or equivalent
Total	**2**		

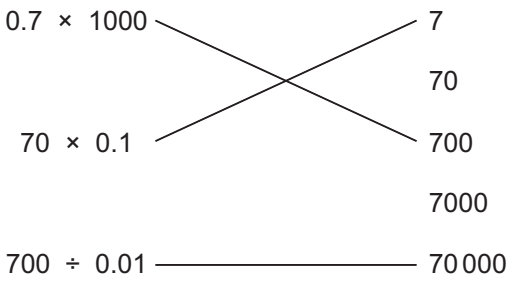
Question	5		
Part	**Mark**	**Answer**	**Further Information**
	1	14	
Total	**1**		

Question	6		
Part	**Mark**	**Answer**	**Further Information**
(a)	1	111(°)	
(b)	1	Angles in a triangle = 180° **or** Angles on a straight line = 180° **or** The external angle of a triangle is equal to the sum of the opposite interior angles. **or** The sum of an interior angle and its exterior angle = 180°	
Total	**2**		

Question	7		
Part	**Mark**	**Answer**	**Further Information**
(a)	1	−7 (°C)	
(b)	1	−10 (°C)	
Total	**2**		

Question	8		
Part	**Mark**	**Answer**	**Further Information**
	1	0.7	Or equivalent Do not accept ratios.
Total	**1**		

Question	9		
Part	**Mark**	**Answer**	**Further Information**
	2	Two calculations to enable comparison e.g. 72% of 50 = 36 and $\frac{1}{2}$ of 50 = 25 **or** 38 marks is 76% (or equivalent) and $\frac{1}{2}$ = 50% **and** David scored the highest.	Do not award any marks for David with no correct working. Award 1 mark for two correct calculations to enable comparison seen, but incorrect or no decision.
Total	**2**		

Question	10		
Part	**Mark**	**Answer**	**Further Information**
	1		All correct for 1 mark.
Total	**1**		

<table>
<tr><td>Question</td><td>11</td><td colspan="2"></td></tr>
<tr><td>Part</td><td>Mark</td><td>Answer</td><td>Further Information</td></tr>
<tr><td></td><td>1</td><td><table><tr><td>input</td><td>output</td></tr><tr><td>1</td><td>5</td></tr><tr><td>6</td><td>15</td></tr><tr><td>9</td><td>21</td></tr><tr><td>15</td><td>33</td></tr></table></td><td>Both correct for the mark.</td></tr>
<tr><td>Total</td><td>1</td><td colspan="2"></td></tr>
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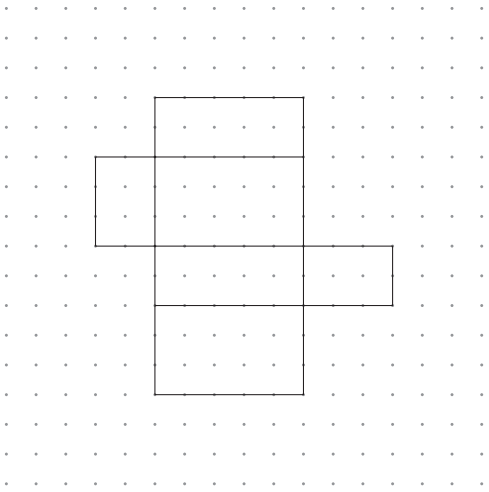
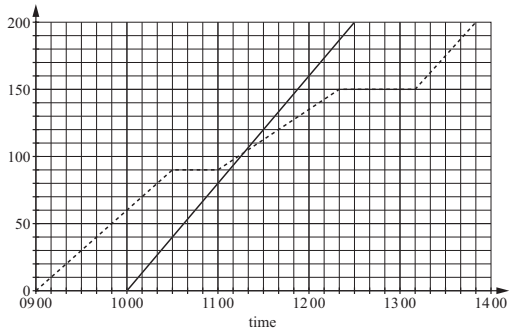
Question	**12**		
Part	**Mark**	**Answer**	**Further Information**
(a)	1	38	
(b)	1	45.6	
(c)	1	4.56	
Total	**3**		

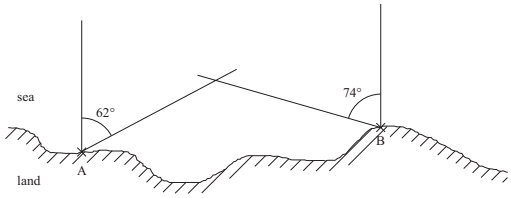
Question	13		
Part	**Mark**	**Answer**	**Further Information**
	1	Award the mark for two 2 x 3 faces correctly positioned, one on each side of the net, e.g. 	
Total	**1**		

Question	14		
Part	**Mark**	**Answer**	**Further Information**
(a)	1		Accuracy in drawing $\pm\frac{1}{2}$ square
(b)	1	80 minutes or equivalent	Accept answers in hours and minutes e.g. 1 hour 20 (minutes) Follow through from **(a)** if their line reaches the top of the graph ($\pm\frac{1}{2}$ square)
Total	**2**		

Question	15		
Part	**Mark**	**Answer**	**Further Information**
	1	0.2^2, $\sqrt[3]{64}$, $\sqrt{25}$, 3^2	Accept 0.04, 4, 5, 9
Total	**1**		

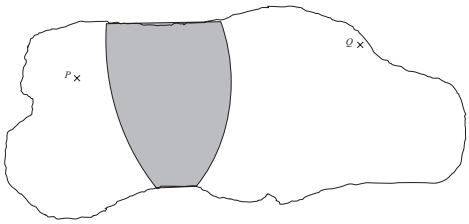
Question	16		
Part	**Mark**	**Answer**	**Further Information**
(a)	2	5.616	Award 1 mark for attempting to multiply 156 by 36 (condone numerical errors but do not accept place value errors).
(b)	2	3.4	Award 1 mark for correct method (e.g. changing to 54.4 ÷ 16)
Total	**4**		

Question	17		
Part	**Mark**	**Answer**	**Further Information**
	2	(n =) 31	Award 1 mark for sight of $n - 3$ or for an equation that simplifies to $2n - 3 = 59$. or Award 1 mark for an answer of 28.
Total	**2**		

Question	18		
Part	**Mark**	**Answer**	**Further Information**
	2		Accept ±2° accuracy of bearings for 2 marks. Accept any clear indication of boat's position including intersecting lines. Award 1 mark for sight of a correct method (accept a line drawn from either *A* or *B* with bearing accurate to ±2°).
Total	**2**		

Question	19		
Part	**Mark**	**Answer**	**Further Information**
	1	True / False $9^0 = 0$ ☐ ✓ $9^3 \times 9^2 = 9^5$ ✓ ☐ $9^8 \div 9^4 = 9^2$ ☐ ✓	All correct for 1 mark.
Total	**1**		

Question	20		
Part	**Mark**	**Answer**	**Further Information**
(a)	2	$\frac{11}{12}$ or equivalent fraction	Award 1 method mark for attempting to subtract two relevant fractions by converting to a common denominator (12 or a multiple of 12).
(b)	2	$3\frac{1}{5}$ or $\frac{16}{5}$ or equivalent fraction	Award 1 method mark for attempting to change to improper fractions and attempting to multiply numerators and denominators together.
Total	**4**		

Question	21		
Part	**Mark**	**Answer**	**Further Information**
	2		1 mark for sight of an arc of a circle centred on *P* and *Q* with a radius accurate to ± 2mm Accept any clear indication of the correct region.
Total	**2**		

Question	22		
Part	**Mark**	**Answer**	**Further Information**
(a)	1	19	
(b)	1	40	
Total	**2**		

Question	23		
Part	**Mark**	**Answer**	**Further Information**
	1	$-2 \leq n \leq 5$ ☐ $-2 < n \leq 5$ ✓ $-2 \leq n < 5$ ☐ $5 \geq n < -2$ ☐	
Total	**1**		

Question	24		
Part	**Mark**	**Answer**	**Further Information**
(a)	1	32 (cm)	
(b)	1	165 (cm)	
(c)	2	Two distinct and valid comparative statements e.g. ▪ Class 8B is taller ▪ The range of class B is larger ▪ The median of 8B is higher than 8A ▪ The tallest person is in Class B.	Award 1 mark for 1 correct statement.
Total	**4**		

Question	25		
Part	**Mark**	**Answer**	**Further Information**
	3	($)0.35 or equivalent	Award 1 mark for finding profit of $2 or total $7. Award 1 mark for their profit (including follow through from an incorrect profit) ÷ 20 **or** Award 1 mark for finding 1 can costs $0.25 Award 1 mark for their can cost (including follow through from an incorrect cost) x 1.4
Total	**3**		

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