Cambridge Secondary 1 Checkpoint

Cambridge International Examinations
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MATHEMATICS **1112/02**

Paper 2 **October 2015**

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.

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

IB15 10_1112_02/4RP

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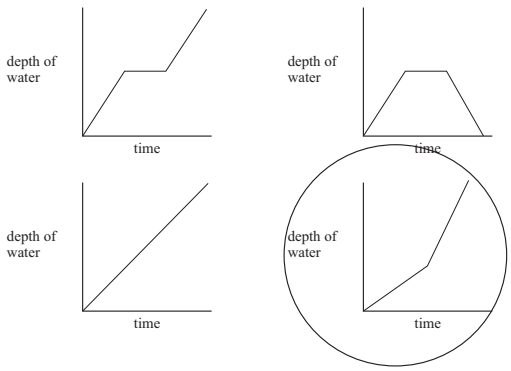
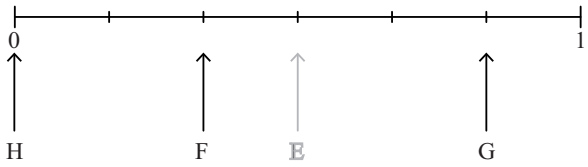
[Turn over

Question number	1		
Part	**Mark**	**Answer**	**Further Information**
	1	Saturday ticked or stated in explanation **and** a correct reason, e.g. • Mode on Monday is 1 and mode on Saturday is 2 • 2 is greater than 1	
Total	**1**		

Question number	2		
Part	**Mark**	**Answer**	**Further Information**
(a)	1	Add 6	
(b)	1	83	
Total	**2**		

Question number	3		
Part	**Mark**	**Answer**	**Further Information**
	1		
Total	**1**		

Question number	4		
Part	**Mark**	**Answer**	**Further Information**
	1	6.85(000…) (cm)	
Total	**1**		

Question number	5		
Part	**Mark**	**Answer**	**Further Information**
	2		Award 1 mark if any 2 of F, G and H are positioned correctly.
Total	**2**		

Question number	6		
Part	**Mark**	**Answer**	**Further Information**
(a)	1	$5y + 8$ or $8 + 5y$	
(b)	1	$12w + 30$ or $30 + 12w$	
Total	**2**		

Question number	7		
Part	**Mark**	**Answer**	**Further Information**
(a)	1	2 : 3	
(b)	1	($)8	Allow follow through from an incorrect answer to part (a).
Total	**2**		

Question number	8		
Part	**Mark**	**Answer**	**Further Information**
	1	52 (%)	
Total	**1**		

Question number	9		
Part	**Mark**	**Answer**	**Further Information**
	2	$\frac{2}{5}$ of 410 38% of 420 **and** ($\frac{2}{5}$ of 410 =) 164 **and** (38% of 420 =) 159.60	Award 1 mark for 159.60 **or** 164 seen
Total	**2**		

Question number	10		
Part	**Mark**	**Answer**	**Further Information**
	2	27.0 (cm)	Award 1 mark for sight of π × 8.6 or 2 × π × 4.3
Total	**2**		

Question number	11		
Part	**Mark**	**Answer**	**Further Information**
(a)	1	$0 \le l < 1$ | | | 3 $1 \le l < 2$ 𝍸 | | | 8 $2 \le l < 3$ 𝍸 | | 7 $3 \le l < 4$ | | 2	
(b)	1	Draws a complete and correct frequency diagram.	Do not award mark for a diagram which has gaps between the bars. Allow follow through from their frequencies.
(c)	1	True ☑ False ☐ True ☑ False ☐	
Total	**3**		

Question number	12		
Part	**Mark**	**Answer**	**Further Information**
	2	(B) C (or kite) D (or parallelogram) A (or rectangle) E (or square)	Award 1 mark for at least 2 correct answers.
Total	**2**		

Question number	13		
Part	**Mark**	**Answer**	**Further Information**
	1	$\frac{(n-5)}{7}$ or equivalent.	
Total	**1**		

Question number	14		
Part	**Mark**	**Answer**	**Further Information**
	1	(0).429 (hectares)	
Total	**1**		

Question number	15		
Part	**Mark**	**Answer**	**Further Information**
	2	(2, –1)	Award 1 mark for each of the coordinates. Award 1 mark for both values correct but incorrect notation used e.g. (*x*2, y-1) (*x* =2, *y* = -1)
Total	**2**		

Question number	16		
Part	**Mark**	**Answer**	**Further Information**
	2	18 000 0.0060	Award 1 mark for each.
Total	**2**		

Question number	17		
Part	**Mark**	**Answer**	**Further Information**
	1	3^7	
Total	**1**		

Question number	18		
Part	**Mark**	**Answer**	**Further Information**
	3	355 (cm^3)	Award 2 marks for a complete correct method, e.g. • 71 × 5 • [(7 × 8) + (5 × 3)] × 5 • [(8 × 4) + (13 × 3)] × 5 • 280 + 75 • 160 + 195 • [7 × 13 - 4 × 5] × 5 Award 1 mark for sight of any of these calculations or answers in brackets: • 7 × 8 + 5 × 3 (= 71) • 8 × 4 + 13 × 3 (= 71) • 7 × 8 × 5 (= 280) • 8 × 4 × 5 (= 160) • 5 × 3 × 5 (= 75) • 13 × 3 × 5 (= 195) • 7 × 13 × 5 (= 455) • 4 × 5 × 5 (= 100)
Total	**3**		

Question number	19		
Part	**Mark**	**Answer**	**Further Information**
	1	8.08	
Total	**1**		

Question number	20		
Part	**Mark**	**Answer**	**Further Information**
(a)	1	Negative (correlation)	
(b)	1	Indicates Graph A and gives a correct reason, e.g. • Babies generally get heavier as they get older • Older babies weigh more • Mass and age of babies will be positively correlated (and Graph A shows positive correlation)	
Total	**2**		

Question number	21		
Part	**Mark**	**Answer**	**Further Information**
	1	9	
Total	**1**		

Question number	22		
Part	**Mark**	**Answer**	**Further Information**
	3	cylinder cuboid jug **and** (volume of cylinder =) 1178 (cm^3) **and** (volume of cuboid =) 1440 (cm^3) or 1178 1440 2000 or 1.18 1.44 2	Award 2 marks for either • 1180 (or better) seen and 1440 seen or • one of 1180 or 1440 seen with a correct follow through order. Assuming only 1 error Award 1 mark for either 1180 (or better) or 1440 seen. Award maximum 1 mark for correct answer **with no working**.
Total	**3**		

Question number	23		
Part	**Mark**	**Answer**	**Further Information**
(a)	2	A straight line passing through (0, 3) and (1.5, 0) **and** extending as far as (-1, 5) **and** (3, -3).	Award 1 mark for: • any straight line through (0, 3) or (1.5, 0) **or** • for a line with gradient –2, i.e. parallel to correct line.
(b)	1	(x) = 2 (y) = -1	Follow through from their **(a)** to the nearest half square if the two lines intersect.
Total	**3**		

Question number	24		
Part	**Mark**	**Answer**	**Further Information**
	2	56.3(38...) or 56 (litres)	For 2 marks accept 56.34 or 56.32 Award 1 mark for an attempt to find the cost of one litre ($1.42) and divide 80 by that. **or** Award 1 mark for an attempt to find the amount that can be bought for $1 (0.704.. litres) and multiply that by 80 **or** Award 1 mark for using proportions e.g. (80 ÷ 54.67) × 38.5
Total	**2**		

Question number	25		
Part	**Mark**	**Answer**	**Further Information**
(a)	1	0.6 or equivalent	
(b)	1	Team A **and** (The relative frequencies are) 0.43(75) or 0.44 and 0.32(14…) **or** $\frac{7}{16}$ is bigger than $\frac{9}{28}$	
Total	**2**		

Question number	26		
Part	**Mark**	**Answer**	**Further Information**
(a)	1	060 (°)	
(b)	1	310 (°)	
Total	**2**		

Question number	27		
Part	**Mark**	**Answer**	**Further Information**
	3	Supermarket (is cheaper) by ($)1.26	Award 2 marks for sight of any of • ($)39.06 • ($)37.8(0) **and** 0.875 × 18 × 2.48 (oe) • Correct method with 1 arithmetic error • 2.17 and 0.07 × 18 Award 1 mark for • 2.10 × 18 • ($)37.8(0) • 18 × 2.48 • 44.64 • 2.17 seen
Total	**3**		

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