CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge International General Certificate of Secondary Education

MARK SCHEME for the May/June 2015 series

0607 CAMBRIDGE INTERNATIONAL MATHEMATICS

0607/12   Paper 1 (Core), maximum raw mark 40

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

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Abbreviations

cao	correct answer only
dep	dependent
FT	follow through after error
isw	ignore subsequent working
oe	or equivalent
SC	Special Case
nfww	not from wrong working
soi	seen or implied

1	(a)	5	1	
	(b)	1	1	
2		1 2 4 8 16	2	**B1** for 3 or 4 factors in list of maximum 5 numbers
3		1.15	2	**M1** for $5 - (1.50 + 2.35)$ oe If 0 scored, **SC1** for 115
4	(a)	$\dfrac{1}{17}$	1	
	(b)	–2, 1, 6	2	**B1** for terms increasing by 3 and then 5 or **B1** for any correct term seen on answer line
5	(a)	6	1	
	(b)	2.5	2	**M1** for ordered list (6 in correct order) or 2 and 3 identified as either side of the median
	(c)	2.9	2	**M1** for method for total Σf soi by 29
6	(a)	95	2	**M1** for $180 - 40 - 55$ or better or $40 + 55$
	(b)	130	1	
		Corresponding	1	
7		560	1	
8	(a)	3.46×10^2	1	
	(b)	2.16×10^{-3}	1	
9		$\dfrac{20 + 30}{0.5}$	**M1**	If 0 scored, **SC1** for two of 20, 30 or 0.5 seen
		100	**A1**	
10		Correct shape in correct place.	2	If 0 scored, **SC1** for correct size & orientation or **SC1** for 3 or 4 points correct

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11		$x + 4$ final answer	1	
12		$[r =] \sqrt{\dfrac{A}{4\pi}}$ or $\dfrac{\sqrt{A}}{\sqrt{4\pi}}$ oe final answer	2	**M1** for $[r^2 =] \dfrac{A}{4\pi}$ or $\sqrt{A} = \sqrt{4\pi r^2}$ or better
13		Correctly eliminating one variable	**M1**	
		$[x =] 1$	**A1**	If 0 scored, **SC1** for correct substitution and evaluation to find the other variable.
		$[y =] 2$	**A1**	**SC1** if no working shown, but 2 correct answers given.
14	**(a)**	A correct	1	
		B correct	1	
	(b)	$-\dfrac{3}{4}$ oe	2FT	**M1** for $\dfrac{\text{rise}}{\text{run}}$ attempted from *their* points provided *their* A and B do not have same y co-ordinate
15	**(a)**	Correct probabilities on branches	1	
	(b)	$\dfrac{1}{25}$	2	**M1** for $\dfrac{1}{5} \times \dfrac{1}{5}$ oe
16	**(a)**	E	1	
	(b)	B	1	