CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge International General Certificate of Secondary Education

MARK SCHEME for the October/November 2015 series

0580 MATHEMATICS

0580/13

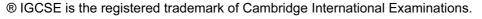
Paper 1 (Paper 1 (Core)), maximum raw mark 56

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.

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.

Cambridge is publishing the mark schemes for the October/November 2015 series for most Cambridge IGCSE[®], Cambridge International A and AS Level components and some Cambridge O Level components.





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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

Qu	estion	Answer	Mark	Part marks
1		6054	1	
2		6.7	1	
3		3	1	
4		170 cao	1	
5		[0].101 or [0].1005 to [0].1006	1	
6		6	1	
7	(a)	12, 15	1	
	(b)	11, 13	1	
8	(a)	5	1	
	(b)	Subtract 4 oe	1	
9		5 - u final answer	2	B1 for $5 + ku$ or $j - u$, $k \neq 0$ as final answer
10	(a)	2	1	
	(b)	-9	1	
11		23.6 or 23.57 to 23.58	2	M1 for $\sin \left[= \right] \frac{2}{5}$ oe
12		$2^3 \times 3^2$ or $2 \times 2 \times 2 \times 3 \times 3$	2	B1 for 2, 2, 2, 3, 3
13		31.6 [2]	2	M1 for $\sqrt{18^2 + 26^2}$
14		Correct triangle with correct arcs	2	B1 for correct triangle without arcs or 1 correct side with arcs
15		562.5 cm ³	2 1	M1 for 5 × 12.5 × 9
16		Any two of $\frac{8}{12}$, $\frac{2}{12}$ or $\frac{3}{12}$ oe	M1	M1 for any 2 correct over a common denominator, $eg \frac{4}{6} and \frac{1}{6}$
		$\frac{8}{12} + \frac{2}{12} - \frac{3}{12}$ oe	M1	or SC2 for final answer $\frac{13}{12}$ or $1\frac{1}{12}$ with full working
		7/12	A1	12 12
17	(a)	3x + 21 final answer	1	
	(b)	2x (1-2x) final answer	2	B1 for $2(x-2x^2)$ or $x(2-4x)$ as final answer

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Qı	uestion	Answer	Mark	Part marks
18	(a)	230	1	
	(b)	C marked in correct position	2	B1 for correct distance 8 cm or correct bearing 155°
19	(a)	[0].00017	1	
	(b)	1.026×10^{-3}	2	B1 for 10.26×10^{-4} oe
20	(a)	96	2	M1 for 360 – (66 + 98 +112)
	(b)	4140	2	M1 for $(25-2) \times 180$ or $25 \times \left(180 - \frac{360}{25}\right)$
21	(a)	12 nfww	2	M1 for $\frac{x}{7.5} = \frac{10}{6.25}$ oe
	(b)	3.75 cao	2	M1 for $\frac{y}{6} = \frac{6.25}{10}$ oe
22		Correctly equating one set of coefficients	M1	eg $10x + 4y = 16$ and $10x - 15y = 130$ or $15x + 6y = 24$ and $4x - 6y = 52$
		Correct method to eliminate one variable	M1	eg $19y = k$ or $hx = 114$ or $19x = m$ or $ny = 76$
		[x =] 4	A1	
		[y =] -6	A1	If zero scored SC1 for 2 values satisfying one of the original equations. SC1 if no working shown, but 2 correct answers given
23	(a) (i)	60	1	
	(ii)	$\frac{90}{360}$ oe	1	
	(iii)	46	2	M1 for $\frac{138}{360} \times 120$
	(b)	2.4 nfww	3	M1 for (0×3) + (1×3) + (2×8) + (3×5) + (4×4) + (5×2) implied by 60
				M1dep for <i>their</i> 60 ÷ 25