

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

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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

Question	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 ≠ 0 as final answer
10 (a)	2	1	
(b)	–9	1	
11	23.6 or 23.57 to 23.58	2	M1 for sin [=] $\frac{2}{5}$ oe
12	2 ³ × 3 ² or 2 × 2 × 2 × 3 × 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 $\frac{8}{12} + \frac{2}{12} - \frac{3}{12}$ oe $\frac{7}{12}$	M1 M1 A1	M1 for any 2 correct over a common denominator, eg $\frac{4}{6}$ and $\frac{1}{6}$ or SC2 for final answer $\frac{13}{12}$ or $1\frac{1}{12}$ with full working
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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Question	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 nfw	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 nfw	3	M1 for $(0 \times 3) + (1 \times 3) + (2 \times 8) + (3 \times 5) + (4 \times 4) + (5 \times 2)$ implied by 60 M1dep for <i>their</i> $60 \div 25$