CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge International General Certificate of Secondary Education

MARK SCHEME for the May/June 2015 series

0580 MATHEMATICS

0580/13 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	700	**1**	
2	56	**1**	
3	$\frac{22}{25}$ cao	**2**	**M1** for $\frac{88}{100}$ oe seen
4	168	**2**	**M1** for 240 ÷ (7 + 3) or better
5	$3x(3x - 2)$ final answer	**2**	**B1** for $x(9x - 6)$ or $3(3x^2 - 2x)$
6	1350 1450	**1, 1**	If zero, award **SC1** for correct but reversed
7	66.4[2.....]	**2**	**M1** for cos [….=] $\frac{2}{5}$ oe
8 (a)	[+] 2	**1**	
(b)	−6	**1**	
9 (a)	7.16[1…]	**1**	
(b)	3.5 oe	**1**	
10 (a)	2.7×10^5	**1**	
(b)	4.57×10^8	**2**	**M1** for $(6.4 \times 10^7 + 8.5 \times 10^8) \div 2$ or better If 0 scored **SC1** for figs 457 or 9.14×10^8
11	44 www	**3**	**M1** for angle [*EBC* =] 360 – (82 + 102 + 64) oe or better **M1FT** for angle *ABE* = 180 – '*their EBC*'
12 (a)	correct horizontal and vertical lines only	**2**	**B1** for one line only correct and no extras
(b)	2	**1**	
13	1.60 cao	**3**	**B2** for 1.597… or 1.6 or **M1** for 2 ÷ 1.252

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14		$\frac{15}{8}$	**B1**	or $\frac{135}{72}$
		their $\frac{15}{8} \times \frac{9}{5}$ oe	**M1**	or $\frac{135}{72} \div \frac{40}{72}$ or equivalent division with fractions with common denominators
		$\frac{27}{8}$ or $3\frac{3}{8}$ cao	**A1**	
15		2.8 oe	**3**	**M2** for $12 + 2 = 8x - 3x$ or better or **M1** for $3x + 12$ or $8x - 2$
16		20.6 or 20.58 to 20.59	**3**	**M2** for $\frac{85 - 67.5}{85} \times 100$ or $\left(1 - \frac{67.5}{85}\right) \times 100$ or **M1** for $\frac{85 - 67.5}{85}$ or $\frac{67.5}{85} \times 100$ If zero scored **SC1** for $\frac{67.5 - 85}{85} \times 100$
17	**(a)**	1, 5	**1**	
	(b)	$\begin{pmatrix} 5 \\ -2 \end{pmatrix}$	**1**	
	(c)	$\begin{pmatrix} 6 \\ -1 \end{pmatrix}$	**1**	
	(d)	$\begin{pmatrix} -18 \\ 42 \end{pmatrix}$	**1**	
18	**(a)**	[0].85 final answer	**2**	**B1** for 0.853[5…] or 13.7 and 16.05 seen
	(b)	0.507 0.5077 $\frac{5}{9}$ 57%	**2**	**M1** for 3 in the correct order or **B1** for [0].57 and [0].55… or 0.56
19	**(a)**	67	**1**	
	(b)	2×3^3 oe	**2**	**B1** for a correct factor tree or 2,3,3,3 identified
	(c)	18 cao	**2**	**B1** for final answer of 2, 3, 6 or 9

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20	**(a)**	2040 or 2036 or 2035.7 to 2036.1	**2**	**M1** for $\pi \times 6^2 \times 18$ If zero, **SC1** for answer of 8140 (after use of diameter)
	(b)(i)	1104	**3**	**M2** for $2\times(20\times14 + 20\times8 + 8\times14)$ oe or **M1** for $20\times14 + 20\times8 + 8\times14$
	(ii)	*their* **(b)(i)** × 100	**1FT**	

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