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UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the May/June 2010 question paper for the guidance of teachers

0580 MATHEMATICS

0580/11

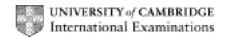
Paper 11 (Core), maximum raw mark 56

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Qu.	Answers	Mark	Part Marks
1	10 18 (am)	1	
2	(a) 41% 0.43 $\frac{4}{9}$	1	accept decimals
	(b) $0.3 < \frac{1}{3}$ only	1	
3	$\frac{3}{5}$	2	W1 for $\frac{21}{35}$ M1 1 - $\frac{14}{35}$ oe
			SC1 answer $\frac{2}{5}$
4	y = 4x - 3 oe	2	W1 for $y = 4x + j$, or $y = kx - 3$ If zero, SC1 for $4x - 3$ $k \ne 0$
5	287°	2	W1 for 73 or 107 marked in correct position at <i>P</i> or M1 107 + 180
6	(a) -7	1	
	(b) 13	1	
7	10	2	M1 for $\frac{\text{their} (17000 - 15300)}{17000}$
			W1 for $\frac{15300}{17000} \times 100$ or answer 90(%)
8	(a) $x + x + 3 + 2x - 7 = 52$ or better	1	
	(b) 14	2ft	W1 for 4x or 56 seen Follow through their (a) if linear and equal to 52 for 1 or 2 marks.
9	2.5(0) or 2.503 to 2.504	3	M1 for $\pi r^2 = 19.7$ soi M1 dep for $19.7 \div \pi$
10	(a) p^7	1	
	(b) $4q^6$	2	W1 for $4q^n$ or kq^6 $k \neq 0$
11	18	3	M1 for exterior angle 180 – 160 implied by 20 (could be on diagram) M1 dep for 360 ÷ their 20
12	(a) 0.01 or $\frac{1}{100}$	1	
	(b) 1	1	
	(c) 7	1	

Page 3 Mark Scheme: Teachers' version		Syllabus	Paper
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13	(x =) 4 (y =) -1	3	M1 for multiplying and subtracting or adding as appropriate. (allow errors in arithmetic operations) or any other correct methods. A1 for one correct variable
14	(a) 90°	1	
	(b) 72°	1	
	(c) 90°	1	
	(d) 36°	1	Ft 180 – (54 + their (c))
15	(a) $\begin{pmatrix} 4 \\ -9 \end{pmatrix}$ (b) $\begin{pmatrix} 0 \\ 28 \end{pmatrix}$	1, 1	
	(b) $\begin{pmatrix} 0 \\ 28 \end{pmatrix}$	1, 1	
16	lines of symmetry 1 0	1, 1	
	order rotational 1 4	1, 1	
17	(a) (i) 0.3 oe	1	
	(ii) 18	1	Follow through their (a)(i) × 60
	(b) horizontal line to (30,3)	1	
	line from (30,3) to (45,0) OR from their (x ,3) to (their x + 15, 0)	1ft	
18	(a) $y(3y-7x)$ final answer	1	
	(b) $4p^2 + 17pr + 2r^2$ final answer	3	W2 for 2 correct terms in answer.
			W1 for 1 correct term in answer.
			OR M1 for $4p^2 + 5pr$ and M1 ind for $12pr + 2r^2$
19	(a) (i) 12	1	
	(ii) 120 ft	2	M1 for attempt to multiply their (a)(i) by 10 soi.
	(b) (i) 625	1	
	(ii) 0.0625	1ft	or their (b)(i) ÷ 10 000