

CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

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MARK SCHEME for the October/November 2012 series

0581 MATHEMATICS

0581/13

Paper 1 (Core), maximum raw mark 56

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Abbreviations

- cao correct answer only
- cso correct solution only
- dep dependent
- ft follow through after error
- isw ignore subsequent working
- oe or equivalent
- SC Special Case
- www without wrong working

Qu.	Answers	Mark	Part Marks
1	74	1	
2	(a) 2	1	
	(b) Correct line drawn	1	
3	57	2	M1 64 or 7
4	(a) $7t$ final answer	1	
	(b) r^{13} final answer	1	
5	96	2	M1 for $\frac{600 \times 2 \times 8}{100}$ oe If zero SC1 696
6	$\frac{1}{100} + \frac{4}{25}$ or $0.1^2 + 0.4^2$ oe	M1	
	$\frac{1}{100} + \frac{16}{100} = 0.17$ or $0.01 + 0.16 = 0.17$	M1	Independent
7	$5p + 11r$ final answer	2	B1 $5p$ or $11r$ seen
8	180	2	M1 for $\frac{300 \times 12}{20}$ oe
9	$3y - y^4$ final answer	2	B1 for $3y$ or $-y^4$ as part of two term expression
10	88.2(0)	2	M1 for 84×1.05 oe
11	249.5 [$\leq j <$] 250.5 cao	2	B1 for either, or both correct but reversed
12	(a) $\frac{5^2 + 20}{\sqrt{100}}$	1	
	(b) 4.5 cao	1	

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13	$4y(x + 3z)$ final answer	2	B1 $4(xy + 3yz)$ or $y(4x + 12z)$ or $2y(2x + 6z)$
14	Accurate perpendicular bisector of RT with arcs.	2	B1 for 2 pairs of correct arcs B1 for correct line
15	8.471 cao	2	B1 for 8.47 or 8.4705 to 8.4706 or $\frac{144}{17}$ or $8\frac{8}{17}$
16	108	3	M2 for $180 - (360 \div 5)$ or $\frac{180(5-2)}{5}$ M1 for $360 \div 5$ or 180×3
17	$\frac{215}{40} - \frac{88}{40}$ $\frac{127}{40}$ or $3\frac{7}{40}$	M2 A1	$3\left(\frac{15}{40} - \frac{8}{40}\right)$ OR M1 for $\frac{15}{40}$ or $\frac{8}{40}$ or $\frac{215}{40}$ or $\frac{88}{40}$
18	(a) 9 (b) Ruled line of best fit drawn (c) positive	1 1 1	
19	(a) (5, 1) marked (b) (-1, 0) (c) 2	1 1 2	M1 correct rise over run
20	(a) 0.71 oe (b) (i) $\frac{3}{20}$ oe or 0.15 or 15% (ii) $\frac{15}{20}$ oe or 0.75 or 75% (iii) 0	1 1 1 1	
21	(a) (i) triangle with arcs (ii) Midpoint marked 5.8 – 6.2 cm (b) (i) Correct sketch (ii) Rhombus or square cao	2 1ft 1 1	M1 1 side correct

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22	(a)	(i) 7.3 – 7.7 cm	1	
		(ii) Tangent	1	
		(iii) <i>D</i> marked on circumference	1	
	(b) 11.3 to 11.3112	2	M1 $3.6 \times \pi$	