MARK SCHEME for the October/November 2013 series

0580 MATHEMATICS

0580/13

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 2013 series for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level components and some Ordinary Level components.



	Page 2	Mark Scheme		Syllabus	Paper
		IGCSE – October/November 2013		0580	13
	Qu.	Answers	Mark	Part Marks	
1		84	1		
2		a(2a-5) final answer	1		
3		29	1		
4		39	2	M1 for $52 \times 45 \div 60$ oe	
5	(a)	2600	1		
	(b)	[0].058	1		
6	(a)	$\frac{6}{11}$	1		
	(b)	Arrow to right of 0.5	1	Reasonable acc	curacy
7		Any two of (20, 8) (-4, 0) (12, 24)	2	B1 for one corr	rect
8	(a)	9[h] 35[min]	1		
	(b)	19 25	1		
9	(a)	3	1		
	(b)	3	1		
10		$\frac{9}{22}$, 0.41, $\frac{3}{7}$, 43%, $\frac{\pi}{7}$	2	B1 for decimal 0.409. 0.449 [0 in correct order	.43], or for 4
11	(a)	$\begin{pmatrix} 6\\ -7 \end{pmatrix}$	1		
	(b)	$\begin{pmatrix} -18\\ 21 \end{pmatrix}$	1FT	'Their (a)' × −.	3
12	(a)	Negative	1		
	(b)	Positive	1		
13		[<i>AB</i> =] 5.3 to 5.7 cm [Bearing] 130° to 134°	1 1	SC1 for correct bearing but state. North line	t length line and rting at base of
14		$[x =]$ 1.75 or $1\frac{3}{4}$ or $\frac{7}{4}$	2	M1 for first co $x + \frac{3}{4} = \frac{10}{4}$,	rrect step $4x = 7$,

Page 3	Mark Scheme		Syllabus	Paper
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15	$\frac{22}{7} - \frac{7}{5}$ 5× their 72 7× their 7	B1		
	$\frac{5 \times their 22}{35} \text{ oe} - \frac{7 \times their 7}{35} \text{ oe or}$ $\frac{5 \times their 22 - 7 \times their 7}{35} \text{ oe}$	M1		
	$\frac{61}{35}$ or $1\frac{26}{35}$ cao	A1		
16	160	3	M1 for sin 15	$=\frac{[]}{628}$ oe or better
			A1 for 162.5[or 162.54 B1 FT correct	
17	30.9 or 30.88 to 30.91	3	M2 for 12×12 4($6 \times 6 - \frac{1}{4} \pi$	$2 - \pi \times 6 \times 6 \text{ or}$ $\times 6 \times 6)$
			M1 for 12×12 ($6 \times 6 - \frac{1}{4} \pi \times 12$	$2 \text{ or } \pi \times 6 \times 6 \text{ or}$ (6×6)
18	(x =) 3, (y =) -2	3	M1 for correct one variable A1 for $[x =]3$ A1 for $[y =] -$	
				SC1 for correct d evaluation to variable
19 (a)	7.5×10^{-2}	2	M1 for 0.075 or 0.75×10^{-1} or	80
(b)	9.3×10^{7}	2		000 or 93×10^6
20 (a)	Circle, radius 3 cm, centre <i>A</i> , not inside the rectangle	2	A radius 3 cm	full circle centre rect size circle at angle
(b)	One line of symmetry with correct arcs E.g.	2	B1 for correct reach or cross B1 for 2 pairs intersecting ar	of correct

	Page 4	Mark Scheme		Syllabus	Paper	
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21	(a) (b)	11x - 7y final answer 3a - 2b final answer	2 2	B1 for $11x \pm my$ or $nx - 7y$ B1 for $8a - 12b$ or $-5a + 10b$ or $3a \pm pb$ or $qa - 2b$		
22	(a) (i) (ii) (iii)	1000 [m] 80 [m/min] 20 [min]	1 2 1	M1 for 1600 ÷ 20		
	(b) (i) (ii)	Ruled line from (11 10, 1600) to (11 35, 0) 11 35	2 1FT		00 ÷ 64 soi t the axis if on the t before 11 10.	