CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge International General Certificate of Secondary Education

MARK SCHEME for the October/November 2014 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.
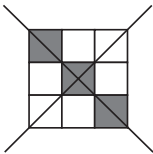
Cambridge will not enter into discussions about these mark schemes.

Cambridge is publishing the mark schemes for the October/November 2014 series for most Cambridge IGCSE®, Cambridge International A and AS Level components and some Cambridge O Level components.

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Abbreviations
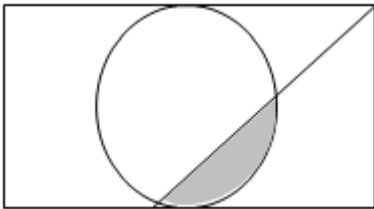
cao	correct answer only
dep	dependent
FT	follow through after error
isw	ignore subsequent working
oe	or equivalent
SC	Special Case
nfww	not from wrong working
soi	seen or implied

Qu.		Answers	Mark	Part Marks
1		$\dfrac{13}{100}$ oe	1	
2	(a)	304 620	1	
	(b)	305 000	1FT	
3	(a)	2	1	
	(b)		1	
4		9.61	2	**B1** for 9.609[1…] or for their answer seen rounded to 2 d.p.
5	(a)	5	1	
	(b)	0.75 oe	1	
6	(a)	23.3	1	
	(b)	−15.5	1	
7	(a)	14	1	
	(b)	1296	1	
8	(a)	$\begin{pmatrix} 2 \\ 4 \end{pmatrix}$	1	
	(b)	$\begin{pmatrix} -9 \\ 18 \end{pmatrix}$	1	
9		$\dfrac{12-10}{15}$ or $\dfrac{12}{15} - \dfrac{10}{15}$ oe	M1	
		$\dfrac{2}{15}$ oe	A1	Answer must be a fraction

10		$\dfrac{y+1}{6}$ oe	2	**B1** for $y+1=6x$ or $\dfrac{y}{6}=x-\dfrac{1}{6}$ If **B0 SC1** for $\dfrac{y-1}{6}$ or $\dfrac{y}{6}+1$
11		$0.34 \quad 0.7^3 \quad 0.6^2 \quad \sqrt{0.6}$	2	**M1** for decimal conversion: 0.7[7…] or 0.8 for $\sqrt{0.6}$ and 0.36 for 0.6^2 and 0.343 for 0.7^3 or **B1** for three in the correct order
12		2.4×10^8	2	**B1** for 240 000 000 oe or **B1** for $k\times10^8$ or 2.4×10^k
13		30	2	**M1** for $2x+3x+4x+90=360$ oe
14		48	2	**M1** for $52\div65\,[\times60]$ oe implied by 0.8
15	**(a)**	1440	2	**M1** for $18\times10\times8$
	(b)	1700	1	
16	**(a)**	$6j-k$	2	**B1** for $6j\pm ak$ or $bj-k$ (a and $b\neq0$)
	(b)	$5(p+2)$	1	
17	**(a)**	12	1	
	(b)	60	1	
	(c)	Irrational number between 1 and 2	1	
18		9.5 or $\dfrac{19}{2}$	3	**M2** for $2x=(8\times3)-5$ or better oe or **M1** for $2x+5=8\times3$ or better
19	**(a)**	16 [kg]	1	
	(b)	Positive	1	
	(c) (i)	Ruled line of best fit	1	
	(ii)	Correct reading from ruled line	1FT	

20	(a)	Complete circle centre *E* radius 3 cm	1	
	(b)	Correct ruled bisector with two pairs of correct arcs	2	**B1** for correct bisector with no/wrong arcs
	(c)		1	dep on attempt at bisector of *C* and enclosed region
21	(a)	58	2	**B1** for $ACB = 90^\circ$ soi as angle at *C* or **M1** for $\tan \dfrac{8}{5}$
	(b)	9.43 to 9.44	2	**M1** for $\left[AB^2 =\right] 8^2 + 5^2$ or $\sin 32 = \dfrac{5}{AB}$ or $\cos 32 = \dfrac{8}{AB}$ oe
22	(a)	Trapezium	1	
	(b)	55°	1	
	(c)	21.4 or 19.55 to 23.37 **nfww**	3	**B1** for [AB =] 7.2, [DC =] 4.7, and [height =] 3.6 seen and **M1** for $0.5 \times their\,3.6 \times their(4.7 + 7.2)$