

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

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Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

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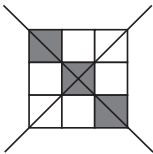
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Abbreviations

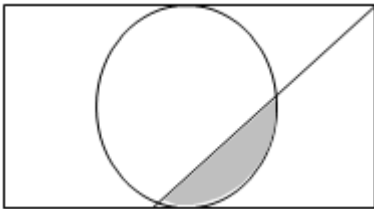
cao	correct answer only
dep	dependent
FT	follow through after error
isw	ignore subsequent working
oe	or equivalent
SC	Special Case
nfww	not from wrong working
soi	seen or implied

Qu.	Answers	Mark	Part Marks
1	$\frac{13}{100}$ 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	$\frac{12-10}{15}$ or $\frac{12}{15} - \frac{10}{15}$ oe $\frac{2}{15}$ oe	M1 A1	Answer must be a fraction

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10	$\frac{y+1}{6}$ oe	2	B1 for $y+1=6x$ or $\frac{y}{6}=x-\frac{1}{6}$ If B0 SC1 for $\frac{y-1}{6}$ or $\frac{y}{6}+1$
11	0.34 0.7 ³ 0.6 ² $\sqrt{0.6}$	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 $k \times 10^8$ or 2.4×10^k
13	30	2	M1 for $2x+3x+4x+90=360$ oe
14	48	2	M1 for $52 \div 65 [\times 60]$ oe implied by 0.8
15 (a)	1440	2	M1 for $18 \times 10 \times 8$
(b)	1700	1	
16 (a)	$6j - k$	2	B1 for $6j \pm ak$ or $bj - k$ (a and $b \neq 0$)
(b)	$5(p+2)$	1	
17 (a)	12	1	
(b)	60	1	
(c)	Irrational number between 1 and 2	1	
18	9.5 or $\frac{19}{2}$	3	M2 for $2x=(8 \times 3)-5$ or better oe or M1 for $2x+5=8 \times 3$ 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	

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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 $\tan \frac{8}{5}$
	(b)	9.43 to 9.44	2	M1 for $[AB^2 =] 8^2 + 5^2$ or $\sin 32 = \frac{5}{AB}$ or $\cos 32 = \frac{8}{AB}$ 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 $0.5 \times \text{their } 3.6 \times \text{their } (4.7 + 7.2)$