

CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

0580 MATHEMATICS

0580/17

Paper 1

Due to a security breach we required all candidates in Kuwait who sat the paper for 0580/12 to attend a re-sit examination in June 2014. Candidates outside Kuwait sat only the original paper and were not involved in a re-sit.

MARK SCHEME for the May/June 2014 series

0580 MATHEMATICS

0580/17

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 May/June 2014 series for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level components and some Ordinary 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
nfw	not from wrong working
soi	seen or implied

Qu	Answers	Mark	Part Marks
1	1 or 3 or 7 or 21	1	
2	402 906	1	
3	Hexagon	1	
4	-5	1	
5	104	1	
6 (a)	>	1	
(b)	<	1	
7 (a)	7	1	
(b)	3 correct lines drawn	1	
8 (a)	$(6 + 14) \div 2 - 3 = 7$	1	
(b)	$9 + 4^2 \times (3 + 2) = 89$	1	
9 (a)	$\frac{2}{7}$ oe	1	ISW cancelling or conversion
(b)	18	1FT	FT <i>their</i> (a) if $0 < \textit{their} (a) < 1$
10	7.75, 7.85	2	B1, B1 If zero scored, SC1 reversed answers
11	648.96	2	M1 for $600\left(1 + \frac{4}{100}\right)^2$ oe
12	0.8665 Final answer	2	B1 for answer 0.866498 to 0.866499 If zero, SC1 for answer 0.866 or 0.8664
13	6.32 or 6.32090 to 6.321	2	M1 for $\tan 36 = \frac{ac}{8.7}$ or better
14	32	2	M1 for $360 - 286$

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15 (a)	87.59	1	
(b)	368.6[0]	2	M1 for 485×0.76 or $485 - (485 \times 0.24)$
16	3, -1	3	M1 for correctly eliminating one variable A1 for $[x =] 3$ A1 for $[y =] - 1$ If zero scored, SC1 for correct substitution and evaluation to find the other variable.
17	7.14 or 7.141...	3	M2 for $\sqrt{(10^2 - 7^2)}$ or M1 for $[BC^2] + 7^2 = 10^2$ oe or for $10^2 - 7^2$ oe
18 10	$\frac{3 \times 1}{3 \times 8}$ and $\frac{8 \times 2}{8 \times 3}$ oe or better $\times \frac{4}{5}$ oe $\frac{19}{24} \times \frac{4}{5} = \frac{76}{120}$ oe Working must be shown	M1 M1 A1	independent
19	360	3	M2 for $96 \times$ <i>their</i> time difference or B1 for 3.75 or $\times \frac{225}{60}$ shown
20 (a)	$\begin{pmatrix} 6 \\ 12 \end{pmatrix}$	1	
(b)	$\begin{pmatrix} 4 \\ -11 \end{pmatrix}$	2	B1 each component
21 (a)	1700 or 1697 or 1696 to 1696.7	2	M1 for $6^2 \times \pi \times 15$
(b)	300 or 303.3 to 304 ml or l	2FT 1	FT provided <i>their</i> volume > than 2 litres M1 for $2000 -$ <i>their</i> volume Dependant on M1 correct unit for their answer
22 (a) (i)	16	1	
(ii)	25 cao	1	
(b)	9, 14, 19	1	

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(c)	$4n - 9$	2	M1 for $4n + k$	
23	(a)	4 points correctly plotted	2	B1 for 1 point correct
	(b) (i)	Ruled line of best fit	1	FT their line, within ± 1 mark
	(ii)	correct value	1FT	
	(iii)	Negative	1	