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## **CAMBRIDGE INTERNATIONAL EXAMINATIONS**

**Cambridge International General Certificate of Secondary Education** 

## MARK SCHEME for the October/November 2015 series

## 0580 MATHEMATICS

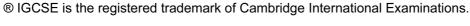
0580/12 Paper 1 (Core), maximum raw mark 56

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 2015 series for most Cambridge IGCSE<sup>®</sup>, Cambridge International A and AS Level components and some Cambridge O Level components.





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Syllabus	Pull	A STATE OF THE STA
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Page 2	Mark Scheme	Syllabus	P. M. A. A. B. I.
	Cambridge IGCSE – October/November 2015	0580	12 1/20 1/3
Abbrevia			sclotto.co
	correct answer only dependent		on

## **Abbreviations**

follow through after error FTignore subsequent working isw

oe or equivalent Special Case SC

not from wrong working nfww

seen or implied soi

Question	Answer	Mark	Part marks
1	17	1	
2	Parallelogram	1	
3	$\sqrt{3}$	1	
4	$[0.3=]\frac{3}{10}$ and $[\frac{1}{3}=]\frac{3}{9}$ or $\frac{1}{3}=0.33[3]$	1	
5 (a) (b)	1426.31 cao 1400 cao	1	
6	520 final answer	2	<b>M1</b> for $2600 \times 5 \times \frac{4}{100}$ oe
7	694 or 694.4[4]	2	<b>M1</b> for 950 ÷ 1.368
8	12	2	<b>M1</b> for $\frac{7.2}{x} = \frac{15}{25}$ oe or better eg $7.2 \times \frac{25}{15}$
9	4n-5 oe	2	<b>M1</b> for $4n + k$ or for $jn - 5$ $(j\neq 0)$
10	48.7 or 48.70	2	<b>M1</b> for $\sin[=]\frac{14.5}{19.3}$ oe
11 (a)	6 cao	1	
(b)	12 final answer	1	
12 (a) (b)	$\begin{pmatrix} 6 \\ -3 \end{pmatrix}$	1	
(b)	$\begin{pmatrix} -5 \\ 7 \end{pmatrix}$	1	

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Page 3	Mark Scheme	Syllabus	P. Jan
	Cambridge IGCSE – October/November 2015	0580	12 19ths

Question	Answer	Mark	Part marks
13	$[y=]\frac{4R}{t}$	2	<b>M1</b> for a correct first step: $4R = ty$ or $\frac{R}{t} = \frac{1}{4}y$
14 (a)	62.5[%]	1	
<b>(b)</b>	130.35 cao	1	
15	correct triangle with correct arcs	2	<b>B1</b> for correct triangle without arcs or 1 correct side with arcs
16	10.96 cao	3	<b>M2</b> for 4×1.27 + 3.5×1.68 or <b>M1</b> for 4×1.27 <b>or</b> 3.5×1.68
17	54	3	<b>M2</b> for $14.4 \times \frac{15}{4}$ oe or <b>M1</b> for $14.4 \div 4$ or $\frac{4}{15}$ associated with $14.4$
			If zero scored <b>SC1</b> for final answer 19.6[4]
18	3.5 nfww	3	<b>M1</b> for $\Sigma fx$ soi
			<b>M1</b> (dep) for ÷ 24
19	6.24 or 6.244 to 6.245	3	M2 for $\sqrt{8^2 - 5^2}$ or M1 for $8^2 = 5^2 + x^2$ or better
20	$2\frac{3}{12}$ or $1\frac{15}{12}$ or $\frac{27}{12}$ or $\frac{9\times3}{4\times3}$	M1	Accept any correct conversion with common denominator $12k$
	their $(\frac{27}{12} - \frac{11}{12} = \frac{16}{12})$ oe	M1	Correct resolving of <i>their</i> subtraction with denominator 12 <i>k</i> showing full working
	$1\frac{1}{3}$ or $\frac{4}{3}$ cao	A1	Working and then simplified answer must both be seen
21	3, 3, 6, 7, 8	3	B2 for two of: 5 numbers with mode 3 5 numbers with median 6 5 numbers with range 5 or B1 for one of them
22 (a)	44 to 48	1	
(b)	507 or 506.7 to 506.8	2	<b>M1</b> for $\pi \times 12.7^2$

			3, 2
Page 4	Mark Scheme	Syllabus	
	Cambridge IGCSE – October/November 2015	0580	12 PH

Que	estion	Answer	Mark	Part marks
23	(a)	-8w + 20 final answer	1	
	(b)	x(6x-1)	1	
	(c)	28	2	<b>M1</b> for $2 \times 7 \times 5 + 3 \times 7 \times (-2)$ or for 70 or -42 seen
24	(a)	111 to 115	1	
	<b>(b)</b>	304 to 320	2	<b>B1</b> for 7.6 to 8.0
	(c)	[0]56 cao	2	<b>M1</b> for 236–180 oe