

**CAMBRIDGE INTERNATIONAL EXAMINATIONS**

Cambridge International General Certificate of Secondary Education

**MARK SCHEME for the May/June 2015 series**

**0580 MATHEMATICS**

**0580/11**

Paper 1 (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.

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<b>Page 2</b>	<b>Mark Scheme</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>Cambridge IGCSE – May/June 2015</b>	<b>0580</b>	<b>11</b>

### Abbreviations

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

<b>Qu</b>	<b>Answer</b>	<b>Mark</b>	
<b>1</b>	Sunday	<b>1</b>	
<b>2</b>	(a) 4	<b>1</b>	
	(b) 16	<b>1</b>	
<b>3</b>	(a) 24 final answer	<b>1</b>	
	(b) 67.5	<b>1</b>	
<b>4</b>	2544	<b>2</b>	<b>M1</b> for $1824 \div 38$ [ $\times 53$ ] oe
<b>5</b>	600	<b>2</b>	<b>M1</b> for $\frac{3000 \times 5 \times 4}{100}$ oe If zero scored, <b>SC1</b> for answer 3600
<b>6</b>	Correct triangle with correct pair of arcs	<b>2</b>	<b>M1</b> for a triangle with one other side correct or for correct pair of arcs
<b>7</b>	(a) circle	<b>1</b>	
	(b) parallelogram	<b>1</b>	
<b>8</b>	(a) $\begin{pmatrix} 9 \\ 15 \end{pmatrix}$	<b>1</b>	
	(b) $\begin{pmatrix} 11 \\ -2 \end{pmatrix}$	<b>1</b>	
<b>9</b>	(a) positive	<b>1</b>	
	(b) More ice creams sold, more sun hats sold oe	<b>1</b>	
<b>10</b>	$24u^2w^3$ final answer	<b>2</b>	<b>B1</b> for 2 correct elements in final answer
<b>11</b>	6.74[0...]	<b>2</b>	<b>M1</b> for $\frac{AB}{11.2} = \sin 37$ or better

Page 3	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – May/June 2015	0580	11

12	(a)	(0, 5)	1	
	(b)	$y = 3x + k$	1	$k$ must be a number, $\neq 5$
13	(a)	$w(3w - 2)$	1	
	(b)	$2x^2 + 8x - 35$ final answer	2	<b>B1</b> for 2 terms correct in final answer or <b>M1</b> for $2x^2 + 3x$ or $5x - 35$
14		11	3	<b>B1</b> for 2000[ml] or 0.005[litres] soi <b>M1</b> for figs $2 \div (6 \times 2 \times 5 \times 3)$ or better or figs 111.... seen
15	(a)	4.8	2	<b>M1</b> for $288 \div (12 \times 5)$ oe
	(b)	1152	1	
16		$\frac{9}{5}$  <i>their</i> $\frac{9}{5} \times \frac{7}{3}$ or $\frac{9 \times 7}{5 \times 3}$  $\frac{21}{5}$ or $4\frac{1}{5}$ cao	<b>B1</b>  <b>M1</b>  <b>A1</b>	or $\frac{63}{35}$  or <i>their</i> $\frac{63}{35} \div \frac{15}{35}$ or equivalent division with fractions with common denominators
17	(a)	$8.26 \times 10^4$	1	
	(b)	$1.99 \times 10^2$	2	<b>B1</b> for figs 199
18		3	3	<b>B1</b> for $15y - 10$ seen or <b>M1</b> for $3y - 2 = 35 \div 5$  <b>and M1</b> for $15y = 35 + \textit{their} (5 \times 2)$ or $3y = \textit{their} (35 \div 5) + 2$
19		correct shaded region	3	<b>B1</b> for ruled line 2cm from and parallel to $AD$  <b>and B1</b> for arc centre $B$ , radius 4cm  <b>and B1</b> for correct shaded region between <i>their</i> vertical line <b>and</b> <i>their</i> arc centre $B$
20	(a) (i)	27, 38	2	<b>B1</b> for 27 <b>and B1FT</b> for <i>their</i> $27 + 11$
	(ii)	Add the next odd number oe	1	
	(b)	1, 5, 9	1	

<b>Page 4</b>	<b>Mark Scheme</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>Cambridge IGCSE – May/June 2015</b>	<b>0580</b>	<b>11</b>

<b>21</b>	<b>(a)</b>	$2 \times 3 \times 5$	<b>2</b>	<b>B1</b> for 2, 3, 5 as prime factors
	<b>(b)</b>	90	<b>2</b>	<b>B1</b> for $90k$ or for listing multiples of each up to 90 or $2 \times 3^2 \times 5$
<b>22</b>	<b>(a)</b>	7.5	<b>2</b>	<b>M1</b> for $[10] \times \frac{6}{8}$ oe
	<b>(b)</b>	12 cao	<b>2</b>	<b>M1</b> for $9 \times \frac{8}{6}$ oe or $9 \times \frac{10}{\text{their (a)}}$