



**Cambridge International Examinations**  
Cambridge International General Certificate of Secondary Education

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**CAMBRIDGE INTERNATIONAL MATHEMATICS**

**0607/11**

Paper 1 (Core)

**May/June 2016**

MARK SCHEME

Maximum Mark: 40

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**Published**

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 2016</b>	<b>0607</b>	<b>11</b>

### Abbreviations

awrt	answers which round to
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

Question	Answer	Marks	Part marks
<b>1</b>	correct shading	<b>1</b>	
<b>2</b>	Sector only correctly drawn.	<b>1</b>	Do <b>not</b> allow diameter
	Chord only correctly drawn.	<b>1</b>	Allow diameter
<b>3</b>	1, 3, 7, 21 cao	<b>2</b>	<b>B1</b> for 3 and 7 and no others or for 3 factors and no wrong numbers or for all 4 factors and one incorrect
<b>4 (a)</b>	48	<b>1</b>	
<b>(b)</b>	14	<b>1</b>	
<b>5</b>	29	<b>1</b>	
<b>6</b>	30, 10	<b>2</b>	<b>M1</b> for $40 \div 4$ or better
<b>7</b>	Rectangle, Rhombus	<b>2</b>	<b>B1</b> for one correct and only one incorrect or for both correct and only one incorrect
<b>8</b>	160	<b>3</b>	<b>M2</b> for $2(2 \times 5 + 5 \times 10 + 2 \times 10)$ oe or <b>M1</b> for areas of any two faces
<b>9</b>	-2, -12	<b>2</b>	<b>B1</b> for -2 as first term in answer  If zero scored, <b>SC1</b> for reverse order
<b>10 (a) (i)</b>	{1, 4, 9}	<b>1</b>	
<b>(ii)</b>	{2, 4, 6, 8}	<b>1</b>	
<b>(iii)</b>	{1, 9}	<b>1</b>	
<b>(b)</b>	Square [numbers]	<b>1</b>	
<b>(c)</b>	$7 \notin A$	<b>1</b>	
	$A \cap B' = \{4\}$	<b>1</b>	

<b>Page 3</b>	<b>Mark Scheme</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>Cambridge IGCSE – May/June 2016</b>	<b>0607</b>	<b>11</b>

<b>Question</b>	<b>Answer</b>	<b>Marks</b>	<b>Part marks</b>
<b>11</b>	120	<b>3</b>	<b>M2</b> for $180 \times 3 - (90 + 110 + 140 + 80)$ oe or <b>B1</b> for $180 \times 3$ oe and <b>M1</b> – $(90 + 110 + 140 + 80)$ oe
<b>12</b>	45	<b>2</b>	<b>M1</b> for $\frac{100}{1000}$ or $\frac{8}{3600}$ oe  If zero scored, <b>SC1</b> for $\frac{100}{8}$
<b>13</b>	Translation $\begin{pmatrix} 0 \\ 3 \end{pmatrix}$	<b>B1</b>  <b>B1</b>	Accept 3 up or 3 in positive $y$ -direction
<b>14</b>	35	<b>1</b>	
<b>15</b>	-3, -2, -1, 0, 1	<b>2</b>	<b>B1</b> for any 3 or 4 correct in the range -3 to 1 If zero scored, <b>SC1</b> for -3, -2, -1, 0, 1, 2
<b>16 (a) (i)</b>	$3(x + 2)$ cao final answer	<b>1</b>	<b>M1</b> for $-6x + 21$ seen
<b>(ii)</b>	$p(p + q)$ cao final answer	<b>1</b>	
<b>(b)</b>	$21 - 5x$ cao final answer	<b>2</b>	
<b>17</b>	Correct method to eliminate one variable  [x =] 4  [y =] 0	<b>M1</b>  <b>A1</b>  <b>A1</b>	Dependant on the coefficients being the same for one of the variables Correct consistent use of addition or subtraction  If zero scored, <b>SC1</b> for correct substitution and evaluation to find other variable, or if no working shown, but 2 correct answers