



Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CAMBRIDGE INTERNATIONAL MATHEMATICS

0607/52

Paper 5 (Core)

May/June 2016

MARK SCHEME

Maximum Mark: 24

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.

Cambridge will not enter into discussions about these mark schemes.

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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	Mark	Part Marks																																
1 (a)	An example and illustration of last – first + 1	1																																	
	(b) $\frac{\text{first+last}}{2}$ oe	1																																	
2 (a)	<table border="1"> <thead> <tr> <th>Sequence</th> <th></th> <th>Median</th> <th>Sum</th> </tr> </thead> <tbody> <tr> <td>3, 4, 5, 6, 7, 8, 9</td> <td>7</td> <td>6</td> <td>42</td> </tr> <tr> <td>7, 8</td> <td>2</td> <td>7.5</td> <td>15</td> </tr> <tr> <td>20, 21, 22, ..., 40</td> <td>21</td> <td>30</td> <td>630</td> </tr> <tr> <td>5, 6, 7</td> <td>3</td> <td>6</td> <td>18</td> </tr> <tr> <td>2, 3, 4, 5, 6, 7, 8, 9</td> <td>8</td> <td>5.5</td> <td>44</td> </tr> <tr> <td>2, 3, 4, 5, 6, 7</td> <td>6</td> <td>4.5</td> <td>27</td> </tr> <tr> <td>5, 6, 7, 8, 9</td> <td>5</td> <td>7</td> <td>35</td> </tr> </tbody> </table>	Sequence		Median	Sum	3, 4, 5, 6, 7, 8, 9	7	6	42	7, 8	2	7.5	15	20, 21, 22, ..., 40	21	30	630	5, 6, 7	3	6	18	2, 3, 4, 5, 6, 7, 8, 9	8	5.5	44	2, 3, 4, 5, 6, 7	6	4.5	27	5, 6, 7, 8, 9	5	7	35	5	B1 for first two rows B1 for each of the last four rows C opportunity
	Sequence		Median	Sum																															
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	7, 8	2	7.5	15																															
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(b) multiply	1																																		
(c) odd [number]	1																																		
(d) ends in .5 oe	1																																		
3	<table border="1"> <thead> <tr> <th>Sequence</th> <th></th> <th>Median</th> <th>Sum</th> </tr> </thead> <tbody> <tr> <td>4, 5, 6</td> <td>3</td> <td>5</td> <td>15</td> </tr> <tr> <td>7, 8, 9, 10</td> <td>4</td> <td>8.5</td> <td>34</td> </tr> <tr> <td>4, 5, 6, 7, 8, 9, 10 or 24, 25</td> <td>7 or 2</td> <td>7 or 24.5</td> <td>49</td> </tr> </tbody> </table>	Sequence		Median	Sum	4, 5, 6	3	5	15	7, 8, 9, 10	4	8.5	34	4, 5, 6, 7, 8, 9, 10 or 24, 25	7 or 2	7 or 24.5	49	5	1st row: B1 2nd row: B1 for sequence B1 for median 3rd row: B1 for sequence B1 for median																
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Question	Answer	Mark	Part Marks
4	485 500	2	B1 500 or 971 seen C opportunity
5	38, 39 8, 9, 10, 11, 12, 13, 14 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	3	B1 for each sequence or B1 for 2×38.5 B1 for 7×11 or 11×7
6 (a)	1, 2, 4, 8, 16 oe median not an integer when even number of terms oe	1 1	
(b)	32 or 64 or 128, etc	1	
Communication seen in one of 2(a), 3, 4, 5 or 6(b)		1	