

CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge International General Certificate of Secondary Education

MARK SCHEME for the May/June 2015 series

0607 CAMBRIDGE INTERNATIONAL MATHEMATICS

0607/52

Paper 5 (Core), maximum raw mark 24

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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Page 2	Mark Scheme	Syllabus 1	Paper 52
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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

nfww not from wrong working

soi seen or implied

1	(a)		1									
	(b) (i)	8, 10, 12, 14	1									
	(ii)	26	1									
	(iii)	$2c + 2$	2	B1 for $2c$ C opportunity								
	(iv)	49	1FT	FT <i>their</i> (b)(iii) providing linear formula C opportunity								
2	(a)	<table border="1"> <tr> <td><i>c</i></td> <td><i>h</i></td> <td><i>o</i></td> <td><i>t</i></td> </tr> <tr> <td>3</td> <td>8</td> <td>1</td> <td>12</td> </tr> </table>	<i>c</i>	<i>h</i>	<i>o</i>	<i>t</i>	3	8	1	12	1	
	<i>c</i>	<i>h</i>	<i>o</i>	<i>t</i>								
3	8	1	12									
(b)	$3c + 3$ oe	2	B1 for $3c$ C opportunity									
3	(a)		1	Both diagrams correct								
	(b)	<table> <tr> <td>4</td> <td>3</td> </tr> <tr> <td>5</td> <td>4</td> </tr> <tr> <td>6</td> <td>5</td> </tr> </table>	4	3	5	4	6	5	1			
	4	3										
	5	4										
6	5											
(c)	<i>m</i>	1										
(d)	96	1										

4	<p>(a)</p> <p>8 10 10 13 12 16</p> <p>(b) (i) $2m$ oe</p> <p>(ii) $3m - 2$ oe</p> <p>(c) 148</p>	<p>1</p> <p>1</p> <p>2</p> <p>2FT</p>	<p>B1 for $3m$ oe C opportunity</p> <p>B1 FT for <i>their</i> 50 soi FT <i>their</i> 50 in <i>their</i> formula for r C opportunity</p>																					
5	<p>(a)</p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">h</th> <th style="width: 15%;">s</th> <th style="width: 15%;">r</th> </tr> </thead> <tbody> <tr><td>1</td><td>m</td><td>$m - 1$</td></tr> <tr><td>2</td><td>$2m$</td><td>$3m - 2$</td></tr> <tr><td>3</td><td>$3m$</td><td>$5m - 3$</td></tr> <tr><td>4</td><td>$4m$</td><td>$7m - 4$</td></tr> <tr><td>5</td><td>$5m$</td><td>$9m - 5$</td></tr> <tr><td>6</td><td>$6m$</td><td>$11m - 6$</td></tr> </tbody> </table> <p>(b) (i) hm oe</p> <p>(ii) $(2h - 1)m - h$ oe isw</p>	h	s	r	1	m	$m - 1$	2	$2m$	$3m - 2$	3	$3m$	$5m - 3$	4	$4m$	$7m - 4$	5	$5m$	$9m - 5$	6	$6m$	$11m - 6$	<p>2</p> <p>1</p> <p>1</p>	<p>B1 for row 4 or 6 correct or either column correct</p> <p>oe</p>
h	s	r																						
1	m	$m - 1$																						
2	$2m$	$3m - 2$																						
3	$3m$	$5m - 3$																						
4	$4m$	$7m - 4$																						
5	$5m$	$9m - 5$																						
6	$6m$	$11m - 6$																						
<p>Communication seen in two of 1(b)(iii), 1(b)(iv), 2(b), 4(b)(ii), 4(c)</p>		1																						