

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.

Cambridge is publishing the mark schemes for the May/June 2015 series for most Cambridge IGCSE[®], Cambridge International A and AS Level components and some Cambridge O Level components.

Page 2	Mark Scheme	Syllabus	Page
	Cambridge IGCSE – May/June 2015	0607	52

Abbreviations

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

1	(a)	$ \begin{array}{cccc} \text{H} & \text{H} & \text{H} & \text{H} \\ & & & \\ \text{H}-\text{C} & -\text{C} & -\text{C} & -\text{C}-\text{H} \\ & & & \\ \text{H} & \text{H} & \text{H} & \text{H} \end{array} $	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 (b)(iii)</i> providing linear formula C opportunity								
2	(a)	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;"><i>c</i></td> <td style="padding: 2px;"><i>h</i></td> <td style="padding: 2px;"><i>o</i></td> <td style="padding: 2px;"><i>t</i></td> </tr> <tr> <td style="padding: 2px;">3</td> <td style="padding: 2px;">8</td> <td style="padding: 2px;">1</td> <td style="padding: 2px;">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)	4 3 5 4 6 5	1									
	(c)	<i>m</i>	1									
	(d)	96	1									

Page 3	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – May/June 2015	0607	52

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