CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge International General Certificate of Secondary Education

MARK SCHEME for the May/June 2015 series

0607 CAMBRIDGE INTERNATIONAL MATHEMATICS

0607/51 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.

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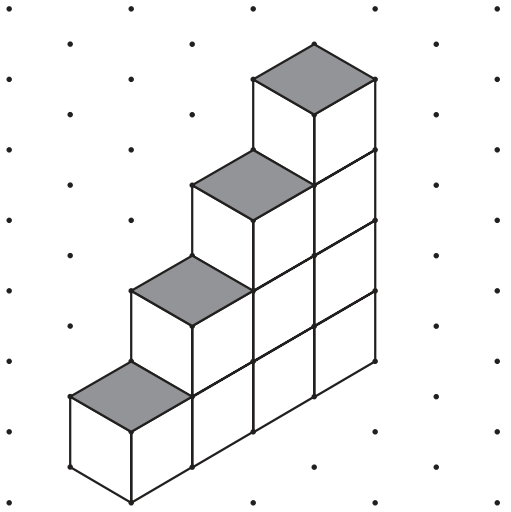
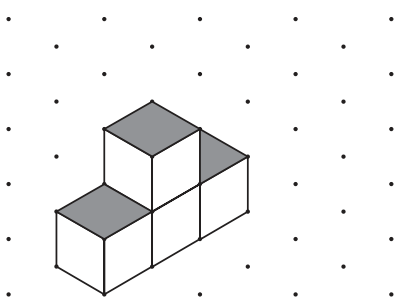
CAMBRIDGE
International Examinations

Page 2	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – May/June 2015	0607	51

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)**	3	**1**	
	(b)		**1**	
	(c)	Height: 1 2 3 4 5 6 Cubes: 1 **3** 6 **10** **15** **21**	**2**	**B1** for 15 **B1** for 21
	(d)	55	**1**	**C** opportunity
	(e) **(i)**	13	**1**	**C** opportunity
	(ii)	9	**1**	**FT** *their* **(i)** if answer <13
2	**(a)**	16	**1**	
	(b)		**1**	

	(c)	<table><tr><td>Height</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td></tr><tr><td>Cubes</td><td>1</td><td>**4**</td><td>9</td><td>**16**</td><td>**25**</td><td>**36**</td></tr></table>	**1**	**B1** for 25 and 36
	(d)	Square [numbers]	**1**	
	(e)	100	**1**	
	(f)	n^2 or $n \times n$ or $1n^2$ cao	**1**	
3	**(a)**	6	**1**	
	(b)	<table><tr><td>Height</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td></tr><tr><td>Cubes</td><td>2</td><td>**6**</td><td>12</td><td>**20**</td><td>**30**</td><td>**42**</td></tr></table>	**2**	**B1** for one of 20, 30, 42 **FT** double *their* **1(c)** with no errors
	(c)	110	**1**	**C** opportunity
	(d) **(i)**	$n^2 + n$ or $n(n + 1)$ oe	**2**	If 0 scored **B1** for kn^2 ($k \neq 0$)
	(ii)	15	**1**	
	(e)	DOUBLE staircase = UP AND DOWN staircase + height (number of steps) oe	**1**	
4	**(a)**	Double staircase = 2 times UP staircase oe	**1**	
	(b)	$\frac{1}{2}n^2 + \frac{1}{2}n$ or $n \times \frac{1}{2}n + \frac{1}{2}n$ oe	**1FT**	**FT** $\frac{1}{2} \times$ *their* **3(d)(i)**
Communication seen in two of **1(d), 1(e)(i), 3(c), 3(d)(ii)**			**1**	