
CAMBRIDGE INTERNATIONAL MATHEMATICS

0607/51

Paper 5 (Core)

May/June 2016

MARK SCHEME

Maximum Mark: 24

Published

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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)	3	1	
(b)	2	1	
(c)	40	1	
(d)	15	1	C opportunity
2 (a)	$\frac{9}{3}$ [= 3] and $\frac{3}{1}$ [= 3] oe seen	1	
(b)	$\frac{3}{2}$ or 1.5 and $\frac{2}{1}$ or 2 oe and No oe	1	
(c) (i)	147	1	C opportunity
(ii)	21 by 150 or 150 by 21	1	FT <i>their(i)</i>
(d) (i)	15	1	C opportunity
(ii)	15 by 78 or 78 by 15	1	FT <i>their(i)</i>
3 (a) (i)	12	1	C opportunity
(ii)	72	1	C opportunity
(iii)	36	1	FT $\frac{their(ii)}{2}$
(iv)	n^2 oe	1	
(b) (i)	3	1	C opportunity
(ii)	6 by 20 or 20 by 6	1	C opportunity

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Question	Answer	Mark	Part Marks																																			
(c)	<table border="1"> <thead> <tr> <th>n</th> <th>x</th> <th>y</th> <th>z</th> <th>Dimensions</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>2</td> <td>4</td> <td>8</td> <td>4 by 10</td> </tr> <tr> <td>6</td> <td>2</td> <td><i>their</i> 12</td> <td><i>their</i> 72</td> <td>12* by 74*</td> </tr> <tr> <td><i>their</i> 3</td> <td>2</td> <td><i>their</i> 6</td> <td>18</td> <td><i>their</i> y by 20</td> </tr> <tr> <td>5</td> <td>7</td> <td>35</td> <td>175</td> <td>35* by 182*</td> </tr> <tr> <td>4</td> <td>1</td> <td>4</td> <td>16</td> <td>4 by 17</td> </tr> <tr> <td>2</td> <td>5</td> <td>10</td> <td>20</td> <td>10* by 25</td> </tr> </tbody> </table>	n	x	y	z	Dimensions	2	2	4	8	4 by 10	6	2	<i>their</i> 12	<i>their</i> 72	12* by 74*	<i>their</i> 3	2	<i>their</i> 6	18	<i>their</i> y by 20	5	7	35	175	35* by 182*	4	1	4	16	4 by 17	2	5	10	20	10* by 25	3	<p>3 for all 8 cells</p> <p>*FT <i>their</i> y by (<i>their</i> $z + 2$)</p> <p>*FT <i>their</i> y by (<i>their</i> $z + 7$)</p> <p>*FT <i>their</i> y by 25</p> <p>B2 for 6 or 7 cells correct or B1 for 4 or 5 cells correct</p>
n	x	y	z	Dimensions																																		
2	2	4	8	4 by 10																																		
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5	7	35	175	35* by 182*																																		
4	1	4	16	4 by 17																																		
2	5	10	20	10* by 25																																		
4 (a)	nx [by] $n^2x + x$ oe	2	B1 for each C opportunity																																			
(b)	$nx : (n^2 + 1)x$ oe seen	1																																				
Communication seen in at least 3 of 1(d), 2(c)(i), 2(d)(i), 3(a)(i), 3(a)(ii), 3(b)(i), 3(b)(ii) or 4(a)		2	C1 if seen in 2 of these																																			