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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** *their*(i)
(d) (i)	15	**1**	**C** opportunity
(ii)	15 by 78 or 78 by 15	**1**	**FT** *their*(i)
3 (a) (i)	12	**1**	**C** opportunity
(ii)	72	**1**	**C** opportunity
(iii)	36	**1**	**FT** $\frac{\textit{their}(\text{ii})}{2}$
(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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<table>
<tr><th>Question</th><th>Answer</th><th>Mark</th><th>Part Marks</th></tr>
<tr><td>(c)</td><td>
<table>
<tr><th>n</th><th>x</th><th>y</th><th>z</th><th>Dimensions</th></tr>
<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>their 12</td><td>their 72</td><td>12* by 74*</td></tr>
<tr><td>their 3</td><td>2</td><td>their 6</td><td>18</td><td>their 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>
</table>
</td><td>3</td><td>3 for all 8 cells

*FT their y by (their z + 2)

*FT their y by (their z + 7)

*FT their y by 25

B2 for 6 or 7 cells correct
or
B1 for 4 or 5 cells correct</td></tr>
<tr><td>4 (a)</td><td>nx [by] $n^2x + x$ oe</td><td>2</td><td>B1 for each
C opportunity</td></tr>
<tr><td>(b)</td><td>$nx : (n^2 + 1)x$ oe seen</td><td>1</td><td></td></tr>
<tr><td colspan="2">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)</td><td>2</td><td>C1 if seen in 2 of these</td></tr>
</table>

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