

Stem and Leaf Diagrams Mark Scheme

<p>1(a)</p>	<div style="text-align: center;"> <table style="border-collapse: collapse; margin: auto;"> <tr> <td style="border-right: 1px solid black; padding: 5px;">0</td> <td style="padding: 5px;">9</td> <td colspan="3"></td> </tr> <tr> <td style="border-right: 1px solid black; padding: 5px;">1</td> <td style="padding: 5px;">3</td> <td colspan="3"></td> </tr> <tr> <td style="border-right: 1px solid black; padding: 5px;">2</td> <td style="padding: 5px;">0</td> <td style="padding: 5px;">2</td> <td style="padding: 5px;">3</td> <td style="padding: 5px;">9</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 5px;">3</td> <td style="padding: 5px;">4</td> <td style="padding: 5px;">6</td> <td style="padding: 5px;">7</td> <td style="padding: 5px;">9</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 5px;">4</td> <td style="padding: 5px;">9</td> <td style="padding: 5px;">9</td> <td colspan="2"></td> </tr> <tr> <td style="border-right: 1px solid black; padding: 5px;">5</td> <td style="padding: 5px;">0</td> <td style="padding: 5px;">4</td> <td style="padding: 5px;">6</td> <td></td> </tr> <tr> <td style="border-right: 1px solid black; padding: 5px;">6</td> <td colspan="4"></td> </tr> <tr> <td style="border-right: 1px solid black; padding: 5px;">7</td> <td colspan="4"></td> </tr> <tr> <td style="border-right: 1px solid black; padding: 5px;">8</td> <td style="padding: 5px;">2</td> <td style="padding: 5px;">3</td> <td colspan="2"></td> </tr> <tr> <td style="border-right: 1px solid black; padding: 5px;">9</td> <td style="padding: 5px;">3</td> <td style="padding: 5px;">3</td> <td style="padding: 5px;">9</td> <td></td> </tr> </table> <table style="margin: auto;"> <tr> <td style="border-right: 1px solid black; padding: 5px;">key</td> <td style="border-right: 1px solid black; padding: 5px;">1</td> <td style="padding: 5px;">3</td> <td style="padding: 5px;">means 13 cm</td> </tr> </table> </div>	0	9				1	3				2	0	2	3	9	3	4	6	7	9	4	9	9			5	0	4	6		6					7					8	2	3			9	3	3	9		key	1	3	means 13 cm	<p>[1] Correct stems</p> <p>[1] Correct leaves</p> <p>[1] Key</p>
0	9																																																							
1	3																																																							
2	0	2	3	9																																																				
3	4	6	7	9																																																				
4	9	9																																																						
5	0	4	6																																																					
6																																																								
7																																																								
8	2	3																																																						
9	3	3	9																																																					
key	1	3	means 13 cm																																																					
<p>1(b)</p>	<p>No she is not correct. The median is the middle number in ordered data. Chloe has described the mean.</p>	<p>[1] Explanation</p>																																																						
<p>2(a)</p>	<p align="center">31</p>	<p>[1] Correct answer</p>																																																						
<p>2(b)</p>	<p align="center">33</p>	<p>[1] Correct answer</p>																																																						
<p>2(c)</p>	<p align="center">55</p>	<p>[1] Correct answer</p>																																																						
<p>3(a)</p>	<p align="center">73.5</p>	<p>[1] Correct answer</p>																																																						
<p>3(b)</p>	<p align="center">$105 - 42 = 63$</p>	<p>[1] Correct answer</p>																																																						
<p>3(c)</p>	<p align="center">$\frac{6}{24} = \frac{1}{4}$</p>	<p>[1] Correct fraction (in either form)</p>																																																						
	<p align="center">25%</p>	<p>[1] Convert to percentage</p>																																																						

Turn over ►

4(a)	<table style="margin-left: auto; margin-right: auto;"> <tbody> <tr><td style="border-right: 1px solid black; padding-right: 10px;">16</td><td>4</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td style="border-right: 1px solid black; padding-right: 10px;">17</td><td>4</td><td>5</td><td></td><td></td><td></td><td></td></tr> <tr><td style="border-right: 1px solid black; padding-right: 10px;">18</td><td>2</td><td>4</td><td></td><td></td><td></td><td></td></tr> <tr><td style="border-right: 1px solid black; padding-right: 10px;">19</td><td>3</td><td>8</td><td>8</td><td></td><td></td><td></td></tr> <tr><td style="border-right: 1px solid black; padding-right: 10px;">20</td><td>6</td><td>7</td><td>8</td><td></td><td></td><td></td></tr> <tr><td style="border-right: 1px solid black; padding-right: 10px;">21</td><td>0</td><td>0</td><td>1</td><td>3</td><td>7</td><td></td></tr> <tr><td style="border-right: 1px solid black; padding-right: 10px;">22</td><td>0</td><td>1</td><td>5</td><td></td><td></td><td></td></tr> <tr><td style="border-right: 1px solid black; padding-right: 10px;">23</td><td>0</td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table> <p style="text-align: center; margin-top: 20px;"> means 16.4 seconds key 16 4 </p>	16	4						17	4	5					18	2	4					19	3	8	8				20	6	7	8				21	0	0	1	3	7		22	0	1	5				23	0						<p>[1] Correct stems</p> <p>[1] Correct leaves</p> <p>[1] Key</p>
16	4																																																									
17	4	5																																																								
18	2	4																																																								
19	3	8	8																																																							
20	6	7	8																																																							
21	0	0	1	3	7																																																					
22	0	1	5																																																							
23	0																																																									
4(b)	20.75 seconds	[1] Correct answer																																																								
4(c)	The median would decrease	[1] Correct box ticked with no others ticked																																																								
5	There is a piece of data missing from the stem and leaf diagram, as the question says there are 20 pieces of data, but there are only 19 leaves in the diagram	[1] Statement discussing data missing																																																								
	The row with 2 as the stem is not ordered correctly	[1] Statement discussing data not fully ordered																																																								
	There is no key	[1] Statement discussing key missing																																																								
6	The median for men is 42, the median for women is 59, therefore the women are generally older than the men	[3] Any 3 valid comparisons																																																								
	The mode for men is 42 and the mode for women is 59, therefore the women are generally older than the men																																																									
	The range for men is 31, the range for women is 39, therefore the spread of ages for women is bigger than the spread of ages for men																																																									
	The mean for men is 43.7, the mean for women is 54.8, therefore the women are generally older than the men																																																									
	The data for men has a positive skew whereas the women's data is symmetrical																																																									

END