



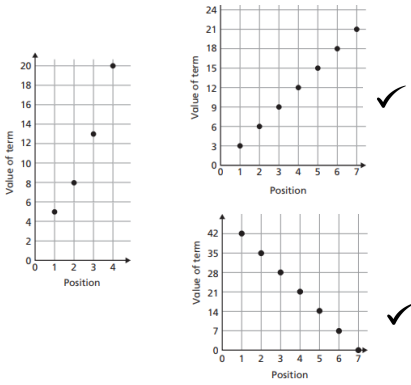


Question	Answer																						
1	<p>a)  <input type="checkbox"/></p> <p>b)  ✓</p> <p>c)  ✓</p> <p>d)  <input type="checkbox"/></p>																						
2	<p>a) $+3, +3, +3$ The sequence is linear as the difference is constant.</p> <p>a) $+3, +5, +5$ The sequence is non-linear as the differences are not constant.</p>																						
3	<p>a) Linear b) Non-linear c) Linear d) Linear e) Linear f) Non-linear</p>																						
4	<p>Tommy is incorrect. The sequence is not linear. The difference is not constant. Sometimes the difference is 5, and sometimes the difference is -5. This is an oscillating sequence.</p>																						
5	<p>a) 27 b) Any number other than 27</p>																						
6	<p>a) <table border="1" data-bbox="278 1263 649 1357"> <tr><th>Position</th><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr> <tr><th>Term</th><td>20</td><td>17</td><td>14</td><td>11</td><td>8</td></tr> </table> ✓</p> <p><table border="1" data-bbox="692 1357 1021 1450"> <tr><th>Position</th><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><th>Term</th><td>0.4</td><td>0.8</td><td>1.2</td><td>1.6</td></tr> </table> ✓</p> <p>b) </p> <p>The points on the graphs showing linear sequences form a straight line. The points on the graph showing a non-linear sequence do not form a straight line.</p>	Position	1	2	3	4	5	Term	20	17	14	11	8	Position	1	2	3	4	Term	0.4	0.8	1.2	1.6
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7	<p>Alex is correct. We only have one difference so we don't know if there is a constant difference. We would need 3 terms to know if a sequence was linear or non-linear, as this would give us two differences and we could see if they are constant or not. Therefore, it is impossible to tell what type the sequence is.</p>
8	<p>a) 75, 225, 375 b) 75, 225, and the third term is any number other than 375 (if the sequence is 3 terms long only)</p> <p>There is only one answer for part a) as you have to add on the same amount each time. For b) there are an infinite number of answers as the difference could be any number. In part a) the 5th term would be 675. For part b) there could be many answers for the 5th term if there is a pattern (e.g. doubling each time). If the sequence is random, then the 5th term can't be predicted.</p>