


<p>12th October</p>  <p>Corbettmaths</p>																											
<p>Which of these is a geometric progression?</p> <p>4, 6, 8, 10, 12</p> <p>4, 6, 10, 16, 24</p>	<p>4, 8, 16, 32, 64</p> <p>4, 7, 12, 19, 28</p>																										
<p>C is the point <math>(x_1, y_1)</math> <math>(6, -3)</math>  D is the point <math>(x_2, y_2)</math> <math>(9, -12)</math></p> <p>Does the point E <math>(-17, 66)</math> lie on the straight line passing through CD?</p> <p>gradient of CD = <math>\frac{y_2 - y_1}{x_2 - x_1} = \frac{-9}{3} = -3</math></p>	<p><math>y = -3x + 15</math></p> <p><math>(-17, 66)</math></p> <p><math>x = -17</math></p> <p><math>-3x - 17 = 51</math> <math>\therefore</math> yes  <math>51 + 15 = 66</math></p>																										
<p>A rectangular field is 30m longer than it is wide.  The area of the field is 5000m<sup>2</sup>  Calculate the width and length of the field.</p> <p><math>x(x + 30) = 5000</math>  <math>x^2 + 30x - 5000 = 0</math></p>	<p>Using quadratic formula</p> <p><math>x = 57.28</math> m width  <math>x + 30 = 87.28</math> m length</p>																										
<table border="1" data-bbox="191 1321 494 1523"> <thead> <tr> <th>Donation</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td><math>0 &lt; d \leq 5</math></td> <td>44</td> </tr> <tr> <td><math>5 &lt; d \leq 10</math></td> <td>35</td> </tr> <tr> <td><math>10 &lt; d \leq 20</math></td> <td>16</td> </tr> <tr> <td><math>20 &lt; d \leq 50</math></td> <td>3</td> </tr> <tr> <td><math>50 &lt; d \leq 100</math></td> <td>2</td> </tr> </tbody> </table> <p style="margin-left: 100px;"> <math>\frac{100}{\quad}</math> </p> <table data-bbox="502 1321 734 1590"> <thead> <tr> <th>MP</th> <th><math>fx</math></th> </tr> </thead> <tbody> <tr> <td>2.5</td> <td>110</td> </tr> <tr> <td>7.5</td> <td>262.5</td> </tr> <tr> <td>15</td> <td>240</td> </tr> <tr> <td>35</td> <td>105</td> </tr> <tr> <td>75</td> <td>150</td> </tr> <tr> <td></td> <td><math>\frac{867.5}{\quad}</math></td> </tr> </tbody> </table>	Donation	Frequency	$0 < d \leq 5$	44	$5 < d \leq 10$	35	$10 < d \leq 20$	16	$20 < d \leq 50$	3	$50 < d \leq 100$	2	MP	$fx$	2.5	110	7.5	262.5	15	240	35	105	75	150		$\frac{867.5}{\quad}$	<p>Paul says the average donation is £10</p> <p>Do you agree?  Explain your answer.</p> <p><math>867.5 \div 100 = \pounds 8.675</math></p> <p>No, the mean is under £10</p>
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<p>Simplify</p> $\frac{x}{4} \times \frac{x-3}{2}$ <p><math>x^2 - 3x</math></p> <p style="text-align: center;">8</p>																											