
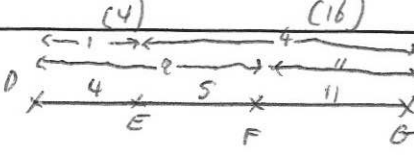


<p>16th June</p> <p>a is directly proportional to the cube of c. w is inversely proportional to the square root of a When c = 2, a = 48 When a = 9, w = 2400</p> <p>Find the value of w when c = 6</p> <p>answer $w = \frac{k}{\sqrt{a}}$ $a = kc^3$ $2400 = \frac{k}{3}$ $48 = k \times 8$ $k = 7200$ $k = 6$ $w = \frac{7200}{\sqrt{a}}$ $a = 6c^3$</p>	<p style="text-align: right;"> Corbettmaths</p> $a = 6 \times 6^3$ $a = 1296$ $w = \frac{7200}{\sqrt{1296}}$ $w = \frac{7200}{36}$ $w = 200$
<p>The points D, E, F and G lie in a straight line.</p> <p>DE : EG = 1 : 4 DF : FG = 9 : 11</p> <p>Work out DE : EF : FG</p>	 <p style="text-align: center;">$4 : 5 : 11$</p>
<p>Find the equation of the line that is perpendicular to $5x + y = 8$ and passes through the point (3, 9)</p> <p>$y = -5x + 8$ $\rightarrow y$</p>	$y = \frac{1}{5}x + c$ $9 = \frac{1}{5}(3) + c$ $9 = 0.6 + c$ $c = 8.4$ $y = \frac{1}{5}x + 8\frac{2}{5}$ <p style="text-align: right;">or 8.4 or $\frac{42}{5}$</p>
<p>A rectangle has an area of $\sqrt{80} \text{ cm}^2$ The length of the rectangle is $(2 + \sqrt{5}) \text{ cm}$</p> <p>Calculate the width. Express your answer in the form $p + q\sqrt{5}$</p>	$\frac{\sqrt{80}}{2 + \sqrt{5}} \times (2 - \sqrt{5}) = \frac{2\sqrt{80} - 20}{-1}$ $\therefore 20 - 2\sqrt{80}$ $= 20 - 8\sqrt{5}$