
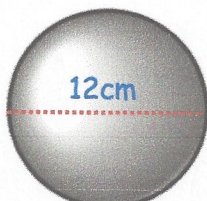


22nd August	
<p>Given</p> $2^y = \frac{1}{16}$ <p>Find y</p>	 Corbettmaths
<p>Show the equation <math>x^2 - 5x + 1 = 0</math> can be written in the form</p> $x = 5 - \frac{1}{x}$	$x^2 = 5x - 1$ $x = 5 - \frac{1}{x}$
<p>Starting with <math>x_0 = 3</math>, use the iteration formula</p> $x_{n+1} = 5 - \frac{1}{x_n}$ <p>twice to find an estimate of the solution of <math>x^2 - 5x + 1 = 0</math></p>	$x_1 = 5 - \frac{1}{3} = 4.6\bar{6}$ $x_2 = 5 - \frac{1}{4.6\bar{6}} = \frac{67}{14}$ $4.785714286$
<p>Here are the first 5 terms of a quadratic sequence</p> $3 \quad 9 \quad 17 \quad 27 \quad 39$ <p>Find an expression, in terms of n, for the nth term of this quadratic sequence</p>	$3 \quad 9 \quad 17 \quad 27 \quad 39$ $6 \quad 8 \quad 10 \quad 12$ $2 \quad 2 \quad 2$ $a=1 \quad b=3 \quad c=-1$ $n^2 + 3n - 1$
<p>A solid sphere has a diameter of 12cm. The sphere is made from glass. The density of the glass is 3.15g/cm</p> <p>Find the mass of the glass sphere.</p>	 $V = \frac{4}{3} \pi r^3$ $= \frac{4}{3} \times \pi \times 6^3$ $= 288\pi \text{ cm}^3$ $m = d \times v$ $= 3.15 \times 288\pi =$

$$d \quad m \quad v$$

$$2850.053g \text{ or } 2.85kg$$