
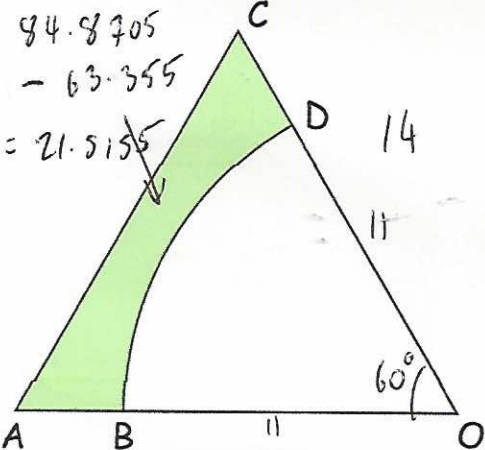


<p>23rd May</p> <p>Simplify $(27x^6)^{\frac{2}{3}}$</p> <p style="text-align: center;">$9x^4$</p>	 Corbettmaths
 <p> 84.8705 $- 63.355$ $= 21.5155$ </p> <p>Area of $OBD = \frac{1}{6} \times \pi \times 11^2$ $= 63.355 \dots \text{cm}^2$</p> <p>Area of $AOC = \frac{1}{2} \times 14 \times 14 \times \sin 60$ $= 84.8705 \text{cm}^2$</p>	<p>AOC is an equilateral triangle of side length 14cm. OBD is a sector of a circle with centre O and radius 11cm.</p> <p>Calculate the area of the shaded region as a percentage of the area of triangle AOC. Give your answer correct to 3 significant figures.</p> <p style="text-align: right;"> $\frac{21.5155}{84.8705} \times 100$ 25.4% </p>
<p>Find the coordinates where the line $x + y = 3$ and the curve $x^2 + 3y = 27$ intersect</p> <p>$x = 3 - y$</p> <p>$(3 - y)(3 - y) + 3y = 27$</p> <p>$9 - 6y + y^2 + 3y = 27$</p>	<p>$y^2 - 3y - 18 = 0$</p> <p>$(y - 6)(y + 3) = 0$</p> <p>$y = 6$ or $y = -3$</p> <p>$x = -3$ $x = 6$</p> <p>$(-3, 6)$ $(6, -3)$</p>
<p>Given $f(x) = \sqrt{3x - 4}$</p> <p>find x when $f(x) = 2.5$</p>	<p style="text-align: center;">$x = 3.41\bar{6}$</p>