
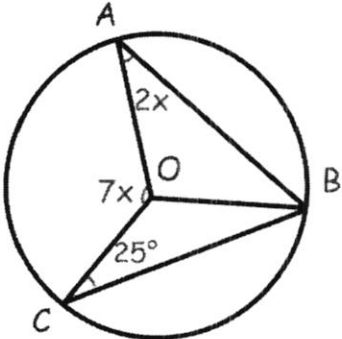


26th July	
Solve the inequality $5x^2 - 14x + 9 < 0$	<div style="text-align: right;">Corbettmaths </div> $(x-1)(5x-9) < 0$ $\underline{1 < x < \frac{9}{5}}$
The first five terms of a sequence are shown below. $1, 5, 11, 19, 29 \dots$ $\quad \quad \quad \begin{matrix} 4 & 6 & 8 & 10 \\ 2 & 2 & 2 & 2 \end{matrix}$ Work out an expression for the nth term of the sequence	$t_n = an^2 + bn + c$ $2a = 2 \Rightarrow a = 1$ $3a + b = 4 \Rightarrow b = 1$ $a + b + c = 1 \Rightarrow c = -1$ $\underline{t_n = n^2 + n - 1}$
$y = \frac{2}{x^5}$ Work out $\frac{dy}{dx}$	$y = 2x^{-5}$ $\frac{dy}{dx} = -10x^{-6}$ $= \underline{\underline{-\frac{10}{x^6}}}$
	Find x $\hat{A}OB = 2x$ $\hat{A}BC = \frac{7}{2}x$ $\hat{O}BC = \frac{3}{2}x$ $\frac{3}{2}x = 25$ $\underline{\underline{x = \frac{50}{3}}}$
Prove $\cos\theta \tan\theta \equiv \sin\theta$	$\text{LHS} = \cancel{\cos\theta} \times \frac{\sin\theta}{\cancel{\cos\theta}}$ $= \underline{\underline{\sin\theta}}$