
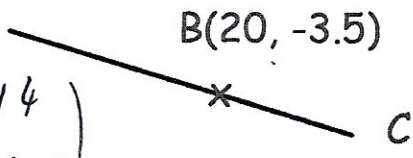


12th February		 Corbettmaths
<p>A circle has equation $(x - 9)^2 + (y + 2)^2 = 25$</p> <p>Write down the coordinates of 5 points on the circle.</p> <p style="text-align: center;">$r = 5$</p> <p style="text-align: center;">3, 4, 5</p>	<p>Centre: $(9, -2)$</p> <p>examples:</p> <p>$(4, -2)$ $(14, -2)$</p> <p>$(9, 3)$ $(9, -7)$</p> <p>$(12, 2)$ $(13, 1)$ etc.</p>	
<p>$y = \frac{3}{x^2}$</p> <p>Work out $\frac{dy}{dx}$</p>	<p>$y = 3x^{-2}$</p> <p>$\frac{dy}{dx} = -6x^{-3}$</p>	<p>$\frac{dy}{dx} = -\frac{6}{x^3}$</p>
<p>ABC is a straight line with A:B = 5:3</p> <p>A(6, 1) B(20, -3.5)</p> <p>$\vec{AB} = \begin{pmatrix} 14 \\ -4.5 \end{pmatrix}$</p> 	<p>Work out the coordinates of C</p> <p>$\frac{1}{5}\vec{AB} = \begin{pmatrix} 2.8 \\ -0.9 \end{pmatrix}$ $\frac{3}{5}\vec{AB} = \begin{pmatrix} 8.4 \\ -2.7 \end{pmatrix}$</p> <p>$\vec{BC} = \begin{pmatrix} 8.4 \\ -2.7 \end{pmatrix}$</p> <p>$C = \begin{pmatrix} 28.4 \\ -6.2 \end{pmatrix}$</p> <p>$(28.4, -6.2)$</p>	
<p>$A = \begin{pmatrix} 3 & -2 \\ 5 & 1 \end{pmatrix}$ $B = \begin{pmatrix} p \\ -3 \end{pmatrix}$</p> <p>$C = \begin{pmatrix} 27 \\ q \end{pmatrix}$</p> <p>$3p + 6 = 27$ $35 - 3 = q$</p> <p>$3p = 21$ $q = 32$</p> <p>$p = 7$</p>	<p>$AB = C$</p> <p>Work out p and q</p> <p>$p = 7$</p> <p>$q = 32$</p>	
	<p>Work out AC</p> <p>$\begin{pmatrix} 17 \\ 167 \end{pmatrix}$</p>	