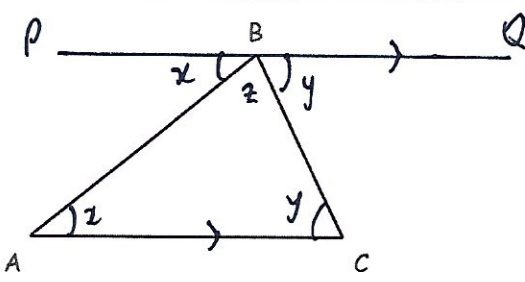

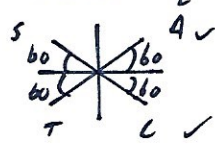


<p>26th February</p> 	<p style="text-align: right;"> Corbettmaths</p> <p>Prove the angles in triangle ABC add up to 180°</p> <p>PBQ & AC are parallel</p> <p>$\angle PBA = \angle CAB = x$ $\angle CBQ = \angle ACB = y$ $\angle ABC = z$</p> <p>As PBQ is a straight line $x + y + z = 180^\circ \therefore$ angles in $\triangle ABC$ add to 180°</p>
<p>Solve</p> $9^{3-7x} = \frac{1}{27^{x-1}}$ $9^{3-7x} = 27^{-(x-1)}$ $(3^2)^{3-7x} = (3^3)^{-(x-1)} \quad (3^2)^{3-7x} = (3^3)^{-x+1}$	$3^{6-14x} = 3^{-3x+3}$ $6-14x = -3x+3$ $3 = 11x$ $x = \frac{3}{11}$
<p>A pizza parlour sells 9 different pizza toppings.</p> <p>Grace orders a pizza with 2 different pizza toppings.</p> <p>How many different pizzas can Grace order?</p>	$\frac{9 \times 8}{2} = 36$
<p>Work out $\frac{dy}{dx}$</p> $y = \frac{7x(x^3 - 2x)}{x^2} = \frac{7x^4 - 14x^2}{x^2}$ $= 7x^2 - 14$	$\frac{dy}{dx} = 14x$
<p>Solve $2\sin^2\theta + 3\cos\theta = 3$</p> <p>for $0^\circ < \theta < 360^\circ$</p> $2(1 - \cos^2\theta) + 3\cos\theta = 3$ $2 - 2\cos^2\theta + 3\cos\theta = 3$ $0 = 2\cos^2\theta - 3\cos\theta + 1$	$0 = (2\cos\theta - 1)(\cos\theta - 1)$ <p>$\cos\theta = \frac{1}{2}$ or $\cos\theta = 1$</p>  <p>$\theta = 60^\circ, 300^\circ$</p>