
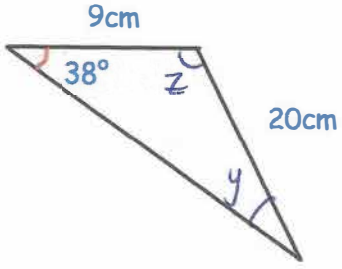


6th March		 CorbettmOths
<p>Solve</p> $\frac{16^{2x+3}}{4^x} = 32$ $\frac{(2^4)^{2x+3}}{(2^2)^x} = 2^5$ $\frac{2^{8x+12}}{2^{2x}} = 2^5$	$= 2^5$ $6x + 12 = 5$ $6x = -7$ $x = -\frac{7}{6}$	
<p>The areas of two mathematically similar shapes are in the ratio 49 : 81</p> <p style="text-align: center;">sides 7 : 9</p> <p>The length of the smaller shape is 24.5cm</p>	<p>Work out the length of the larger shape.</p> $24.5 \div 7 = 3.5$ $3.5 \times 9 = 31.5 \text{ cm}$	
<p>Sophie estimated that the distance between Bristol and Newcastle is about 290 miles and that her average driving speed would be 60 mph.</p> $t = \frac{d}{s}$ <p>She estimated the distance to the nearest 10 miles and the speed to the nearest 10 mph.</p> <p>Calculate the lower bound of the time the journey should take.</p> <p>Give your answer in hours and minutes.</p> <p>Give your answer to the nearest minute.</p>	<p>distance UB = 295 LB = 285</p> <p>speed UB = 65 LB = 55</p> $\text{Min time} = \frac{\text{min } d}{\text{max } s}$ $= \frac{285}{65}$ $= 4.3846\dots$ <p>4 hours 23 minutes</p>	
 $\frac{\sin 38}{20} = \frac{\sin y}{9}$ $y = 16.084\dots$	<p>Calculate the area of the triangle</p> $Z = 125.916^\circ$ $\frac{1}{2} \times 9 \times 20 \times \sin 125.916$ 72.889 cm^2	