

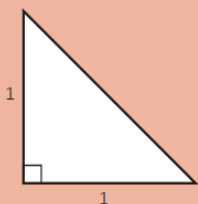
FOR GCSE (9-1) MATHEMATICS . . .

Do you know the exact value of $\sin\theta$ and $\cos\theta$ for $\theta = 0^\circ, 30^\circ, 45^\circ, 60^\circ$ and 90° ?

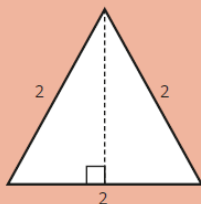
Do you know the exact values of $\tan\theta$ for $\theta = 0^\circ, 30^\circ, 45^\circ$ and 60° ?



Can you use the diagrams and rules below to find the exact values you need to remember?



Pythagoras' theorem
 $a^2 + b^2 = c^2$



$$\sin\theta = \frac{\text{opp}}{\text{hyp}}$$

$$\cos\theta = \frac{\text{adj}}{\text{hyp}}$$

$$\tan\theta = \frac{\text{opp}}{\text{adj}}$$

Is there a pattern to the exact values below that could help you remember them?

$$\begin{array}{lll} \sin 0^\circ = \frac{\sqrt{0}}{2} = 0 & \cos 0^\circ = \frac{\sqrt{4}}{2} = 1 & \tan 0^\circ = 0 \\ \sin 30^\circ = \frac{\sqrt{1}}{2} = \frac{1}{2} & \cos 30^\circ = \frac{\sqrt{3}}{2} & \tan 30^\circ = \frac{\sqrt{3}}{3} \\ \sin 45^\circ = \frac{\sqrt{2}}{2} & \cos 45^\circ = \frac{\sqrt{2}}{2} & \tan 45^\circ = \frac{\sqrt{3}}{\sqrt{3}} = 1 \\ \sin 60^\circ = \frac{\sqrt{3}}{2} & \cos 60^\circ = \frac{\sqrt{1}}{2} = \frac{1}{2} & \tan 60^\circ = \frac{\sqrt{3}}{1} \\ \sin 90^\circ = \frac{\sqrt{4}}{2} = 1 & \cos 90^\circ = \frac{\sqrt{0}}{2} = 0 & \end{array}$$



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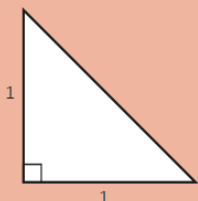
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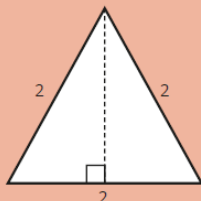
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