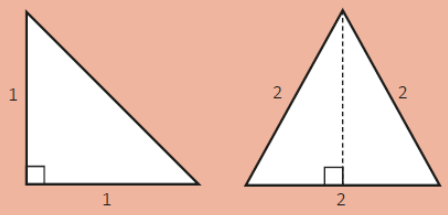
OCR GCSE (9-1) Mathematics recalling trigonometric ratios guide – print off and stick in student books!

FOR GCSE (9–1) MATHEMATICS . . .

Do you know the exact value of sinθ and cosθ for $\theta = 0°, 30°, 45°, 60°$ and $90°$?

Do you know the exact values of tanθ for $\theta = 0°, 30°, 45°$ 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?

$\sin 0° = \frac{\sqrt{0}}{2} = 0$	$\cos 0° = \frac{\sqrt{4}}{2} = 1$	$\tan 0° = 0$
$\sin 30° = \frac{\sqrt{1}}{2} = \frac{1}{2}$	$\cos 30° = \frac{\sqrt{3}}{2}$	$\tan 30° = \frac{\sqrt{3}}{3}$
$\sin 45° = \frac{\sqrt{2}}{2}$	$\cos 45° = \frac{\sqrt{2}}{2}$	$\tan 45° = \frac{\sqrt{3}}{\sqrt{3}} = 1$
$\sin 60° = \frac{\sqrt{3}}{2}$	$\cos 60° = \frac{\sqrt{1}}{2} = \frac{1}{2}$	$\tan 60° = \frac{\sqrt{3}}{1}$
$\sin 90° = \frac{\sqrt{4}}{2} = 1$	$\cos 90° = \frac{\sqrt{0}}{2} = 0$	

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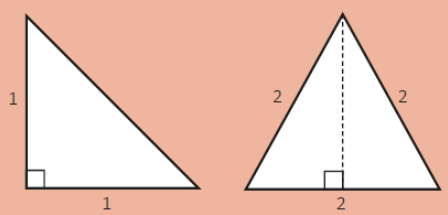

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