GCSE HIGHER · REVISION MAT 4

Exact trigonometric values

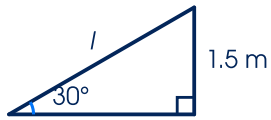
1 Write down the exact value of sin 0°.

2 Write down the exact value of cos 45°.

3 Show that tan 60° × tan 30° = 1.

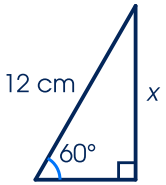
4 A ramp makes an angle of 30° with the ground and rises 1.5 m.

Find the exact length of the ramp.



5 Show that $cos^2 30° = \frac{3}{4}$.

6 Find the exact value of x.



7 Explain why the equation sin x = 2 has no solutions.

8 Find the exact value of

$(\sin 45° + \cos 45°)^2$

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Exact trigonometric values

1 0

2 $\frac{\sqrt{2}}{2}$

3 $\sqrt{3} \times \frac{1}{\sqrt{3}}$

$= 1$

4 $\sin 30° = \frac{1.5}{L}$

$L = 3$ m

5 $(\frac{\sqrt{3}}{2})^2$

$= \frac{3}{4}$

6 $x = 12 \sin 60°$

$6\sqrt{3}$ cm

7 $\sin x$ is always between -1 and 1.

8 $(\frac{\sqrt{2}}{2} + \frac{\sqrt{2}}{2})^2 = (\sqrt{2})^2$

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