GCSE HIGHER · REVISION MAT 3

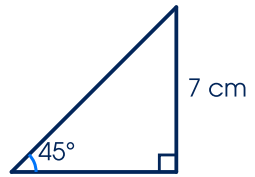
Exact trigonometric values

1 Write down the exact value of $\cos 60°$.

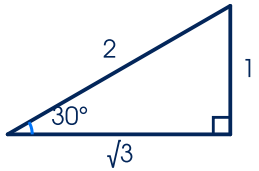
2 Write down the exact value of $\tan 0°$.

3 Explain why $\tan 90°$ is undefined.

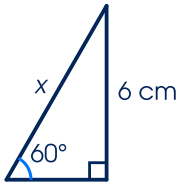
4 Find the exact length of the hypotenuse.



5 Show that $\tan 30° = \frac{\sqrt{3}}{3}$.



6 Find the exact value of x.



7 Show that $\sin 30° + \cos 60° = 1$.

8 An equilateral triangle has perimeter 18 cm.

Find its exact area.



ANSWERS · REVISION MAT 3

Exact trigonometric values

1 $\frac{1}{2}$

2 0

3 $\tan 90° = \frac{\sin 90°}{\cos 90°} = \frac{1}{0}$,
and you cannot divide by 0.

4 Isosceles: both short sides 7 cm
$7\sqrt{2}$ cm

5 $\frac{1}{2} \div \frac{\sqrt{3}}{2} = \frac{1}{\sqrt{3}}$
$= \frac{\sqrt{3}}{3}$

6 $\sin 60° = \frac{6}{x}$
$x = \frac{12}{\sqrt{3}} = 4\sqrt{3}$ cm

7 $\frac{1}{2} + \frac{1}{2}$
$= 1$

8 Side 6 cm
$\frac{1}{2} \times 36 \times \sin 60°$
$9\sqrt{3}$ cm^2

Mr&Mrs MATHS