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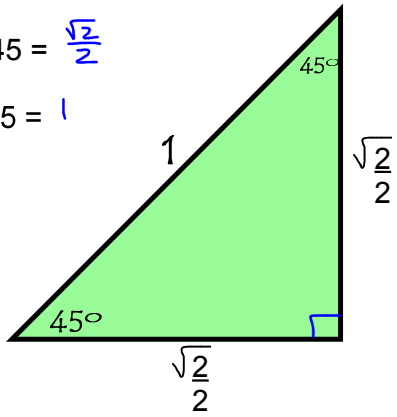
Special Triangles

sin 45 = $\frac{\sqrt{2}}{2}$

cos 45 = $\frac{\sqrt{2}}{2}$

tan 45 = 1



$\sin 30 = \frac{1}{2}$

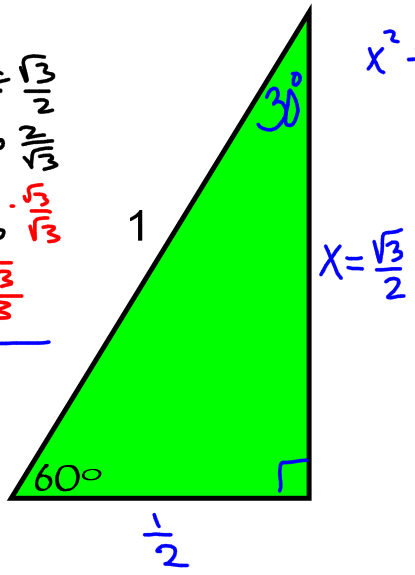
$\cos 30 = \frac{\sqrt{3}}{2}$

$\tan 30 = \frac{1}{2} \div \frac{\sqrt{3}}{2}$

$= \frac{1}{2} \cdot \frac{2}{\sqrt{3}}$

$= \frac{1}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}}$

$\tan 30 = \frac{\sqrt{3}}{3}$



$x^2 + \left(\frac{1}{2}\right)^2 = 1^2$

$x^2 + \frac{1}{4} = 1$

$x^2 = \frac{3}{4}$

$x = \sqrt{\frac{3}{4}} = \frac{\sqrt{3}}{\sqrt{4}}$

$x = \frac{\sqrt{3}}{2}$

$\sin 60 = \frac{\sqrt{3}}{2}$

$\cos 60 = \frac{1}{2}$

$\tan 60 = \frac{\sqrt{3}}{2} \div \frac{1}{2}$

$= \frac{\sqrt{3}}{2} \cdot \frac{2}{1} = \sqrt{3}$

Trig Ratios of Reference Angles

Deg.	Rad.	sin	cos	tan
0				
30		$\frac{1}{2}$	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{3}}{3}$
45		$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{2}}{2}$	1
60		$\frac{\sqrt{3}}{2}$	$\frac{1}{2}$	$\sqrt{3}$
90				