

	0°	30°	45°	60°	90°
Sin	0	$\frac{1}{2}$	$\frac{1}{\sqrt{2}}$	$\frac{\sqrt{3}}{2}$	1
Cos	1	$\frac{\sqrt{3}}{2}$	$\frac{1}{\sqrt{2}}$	$\frac{1}{2}$	0

Tan	0	$\frac{1}{\sqrt{3}}$	1	$\sqrt{3}$	Doesn't exist!
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How to use your hand



For sin and cos

You are going to count in from the end, put your number in a square root and the answer over 2. ???

- * Say you want $\sin 30$. **Don't** count the finger you are aiming for, so you've got 1 finger from the sin end.
- * square root it... $\sqrt{1}$ but the square root of 1 is 1!
- * Put that over 2
- * $\frac{1}{2} = \sin 30$

- * How about $\cos 45$? That finger is 2 in from the cos end.
- * Square root it... $\sqrt{2}$
- * Put it over 2
- * $\frac{\sqrt{2}}{2}$ but you can simplify this.
- * Think about it $\sqrt{2} \times \sqrt{2} = 2$ so...
- * $\frac{\sqrt{2}}{\sqrt{2} \text{ times } \sqrt{2}}$ now cancel and you get $\frac{1}{\sqrt{2}}$

For tan

Work out the sin and cos and put the top bit of the sin over the top bit of the cos.

$$\text{So } \tan 45 = \frac{\sqrt{2}}{\sqrt{2}} = 1$$