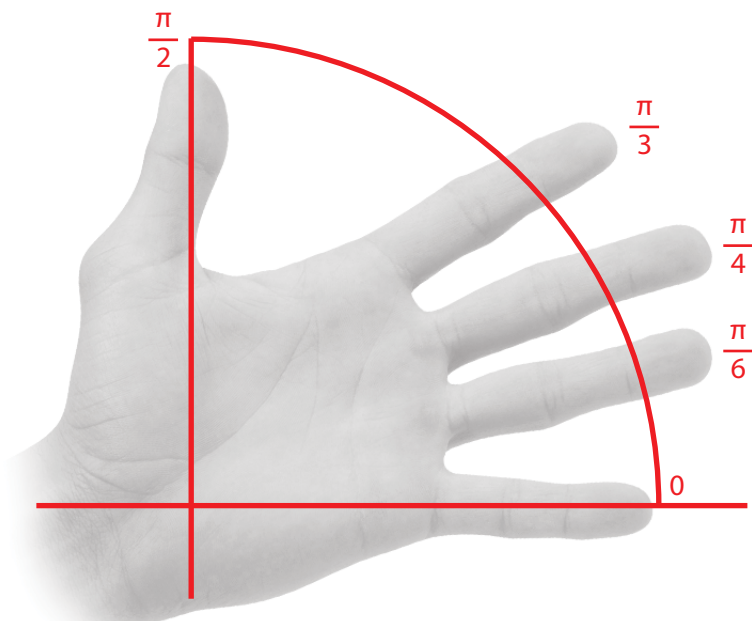


EVALUATING THE UNIT CIRCLE: LEFT HAND TRICK

$$\frac{\sqrt{\# \text{ fingers}}}{2}$$



To Evaluate Cosine:

$$\cos\theta = \frac{\sqrt{\# \text{ fingers left}}}{2}$$

To Evaluate Sine:

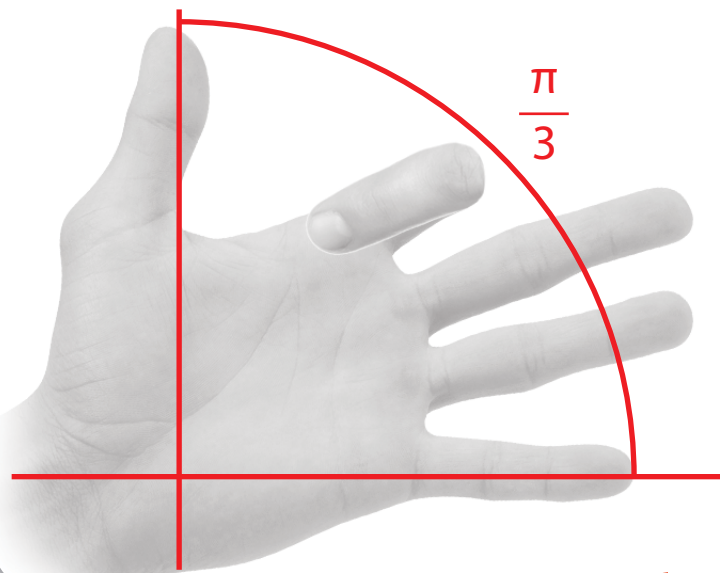
$$\sin\theta = \frac{\sqrt{\# \text{ fingers right}}}{2}$$

To Evaluate Tangent:

$$\tan\theta = \frac{\sqrt{\# \text{ fingers right}}}{\sqrt{\# \text{ fingers left}}}$$

1. Imagine your left-hand, palm up, is in the first quadrant of the Unit Circle
2. Lower the finger that represents the desired angle
3. To find $\cos\theta$ of an angle: Square root of the number of fingers to the left of your bent finger divided by 2
4. To find $\sin\theta$ of an angle: Square root of the number of fingers to the right of your bent finger divided by 2
5. To find $\tan\theta$ of an angle: Square root of the number of fingers to the right divided by the Square root of the number of fingers to the left

Example: Evaluate $\cos\theta$, $\sin\theta$, and $\tan\theta$ for $\theta = \frac{\pi}{3}$



$$\cos \frac{\pi}{3} = \frac{\sqrt{\# \text{ fingers left}}}{2} = \frac{\sqrt{1}}{2} = \frac{1}{2}$$

$$\sin \frac{\pi}{3} = \frac{\sqrt{\# \text{ fingers right}}}{2} = \frac{\sqrt{3}}{2}$$

$$\tan \frac{\pi}{3} = \frac{\sqrt{\# \text{ fingers right}}}{\sqrt{\# \text{ fingers left}}} = \frac{\sqrt{3}}{\sqrt{1}} = \frac{\sqrt{3}}{1}$$