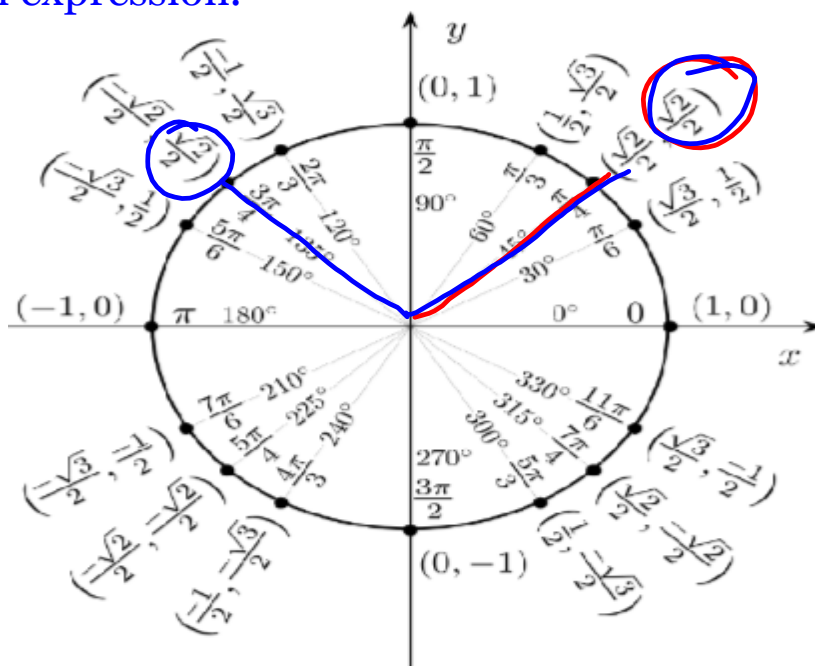# Warm - Up

Find the value of each expression.

1.) $\sin \dfrac{\pi}{4} =$ $\dfrac{\sqrt{2}}{2}$

2.) $\sin^{-1}\left(\dfrac{\sqrt{2}}{2} \right) =$

$45°, 135°$

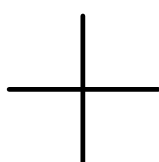Day 1

5.6

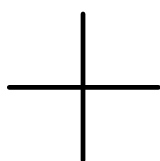I can evaluate composition of trigonometric functions.

<p style="text-align:center; color:red">REMEMBER!!!</p>

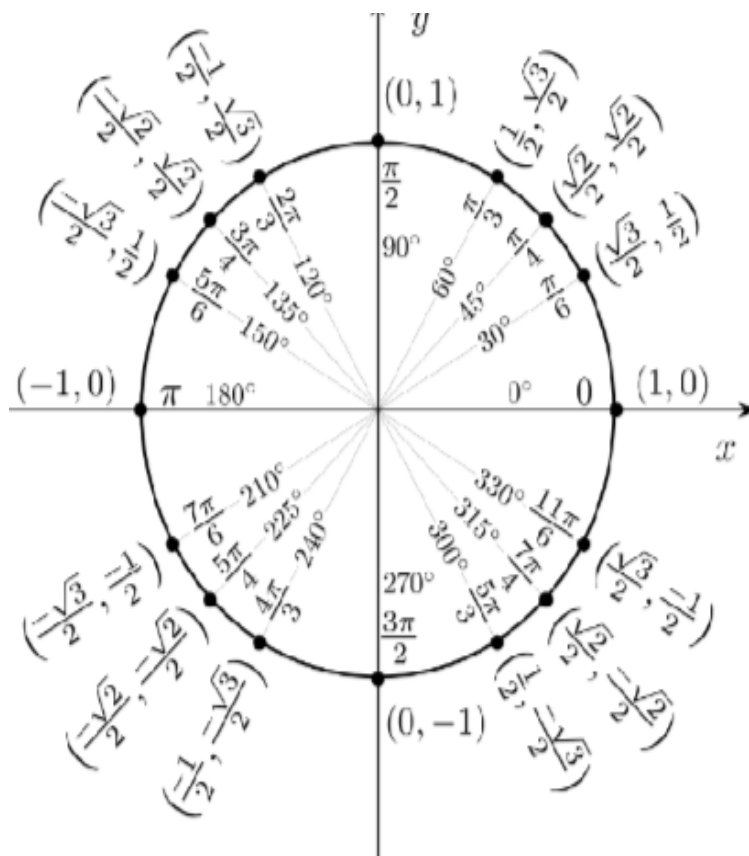| Inverse Sine	Inverse Cosine	Inverse Tangent
$\sin^{-1}$ arcsin	$\cos^{-1}$ arccos	$\tan^{-1}$ arctan
QI & QIV	QI & QII	QI & QIV
$[-90°,\ 90°]$	$[0°,\ 180°]$	$(-90°,\ 90°)$
$\left[-\dfrac{\pi}{2},\ \dfrac{\pi}{2}\right]$	$[0,\ \pi]$	$\left(-\dfrac{\pi}{2},\ \dfrac{\pi}{2}\right)$
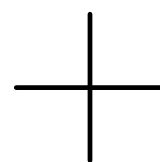
Find the exact value of each expression.

1.) $\tan^{-1}\left(\csc\dfrac{\pi}{2}\right)$ y   1 $\leq$ t

$$\frac{y}{x}\tan^{-1}(1) = \boxed{45°,\ 225°}$$

2.) $\arccos\left(\sin\left(-\dfrac{\pi}{4}\right)\right)$

$\arccos\left(-\dfrac{\sqrt{2}}{2}\right)$

$$\boxed{135°,\ 225°}$$

3.) $\arctan\left(\overset{\text{cos}}{\sec}\pi\right)$

$\arctan(-1)$

$\boxed{\theta = 315°, 135°}$

$\dfrac{7\pi}{4}, \dfrac{3\pi}{4}$

4.) $\sin^{-1}\left(\sin\left(-\dfrac{\pi}{3}\right)\right)$

$-\dfrac{\pi}{3}$