

Worksheet: **Basics Trig concepts sections 7.4-7.5**

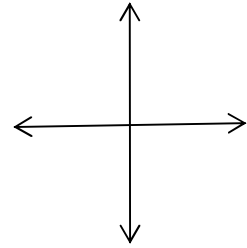
Do NOT use a CALCULATOR

**Section 7.4 page 549**

1. The sine function is negative in what quadrant(s)? **III & IV**

2. The cosine function is negative in what quadrant(s)? **II & III**

3. The tangent function is negative in what quadrant(s)? **II & IV**

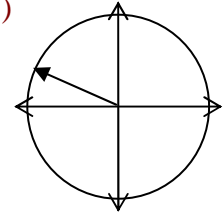


4. Draw a 150° angle. **See page 549-551 & 558**       $(x, y) = (\cos \theta, \sin \theta)$

What is its reference angle (in degrees)? **30°**

150° corresponds to how many radians?  **$\frac{5\pi}{6}$**

$$\sin 150^\circ = \frac{1}{2} \qquad \cos 150^\circ = -\frac{\sqrt{3}}{2}$$

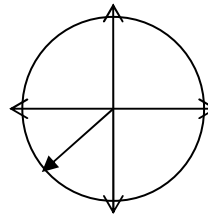


5. Draw an angle of  $\frac{5\pi}{4}$  radians.

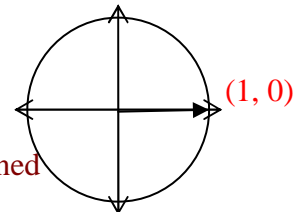
What is its reference angle (in radians)?  **$\frac{\pi}{4}$**

$\frac{5\pi}{4}$  corresponds to how many degrees? **225°**

$$\sin \frac{5\pi}{4} = -\frac{\sqrt{2}}{2} \qquad \tan \frac{5\pi}{4} = +1$$



6.  $\sin 0^\circ = \mathbf{0}$ ,       $\cos 0^\circ = \mathbf{1}$ ,       $\tan 0^\circ = \mathbf{0}$   
 $\csc 0^\circ = \mathbf{undefined}$ ,       $\sec 0^\circ = \mathbf{1}$ ,       $\cot 0^\circ = \mathbf{undefined}$

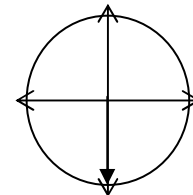


7. Draw an angle of  $\frac{3\pi}{2}$  radians. **See Ex 2 in 7.4 & definitions in 7.5**

Label coordinates  $(a, b) = ( \quad , \quad )$  for this angle.

$$\sin \frac{3\pi}{2} = \mathbf{-1}$$
,       $\cos \frac{3\pi}{2} = \mathbf{0}$ ,       $\tan \frac{3\pi}{2} = \mathbf{undefined}$

$$\csc \frac{3\pi}{2} = \mathbf{-1}$$
,       $\sec \frac{3\pi}{2} = \mathbf{undefined}$ ,       $\cot \frac{3\pi}{2} = \mathbf{0}$



$(a, b) = \mathbf{(0, -1)}$