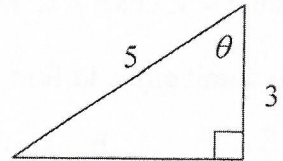


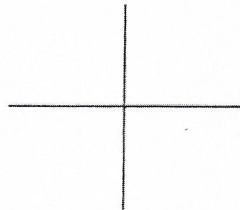
Review:1 Trig Review and the Unit Circle

1: Use the triangle at right to find

- a. $\sin \theta$ b. $\tan \theta$ c. $\sec \theta$



2: Find the following, if θ is an angle in standard position whose terminal side passes through the point $(-5, 2)$.



$\sin \theta =$

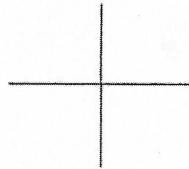
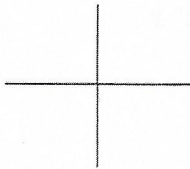
$\csc \theta =$

$\cot \theta =$

3: Draw angles in standard position and make "reference triangles" to find:

a. $\cos 210^\circ =$

b. $\tan 315^\circ =$



4: Since 2π radians $= 360^\circ$, it follows that $\pi^R = 180^\circ$, and the following common radian measures should be easy to think about in degrees. Convert each common radian measure to degrees.

a. $\frac{\pi}{2} =$

b. $\frac{\pi}{4} =$

c. $\frac{\pi}{3} =$

d. $\frac{\pi}{6} =$

5: Convert from radians to degrees or degrees to radians without using a calculator.

a. $\frac{5\pi}{4} =$

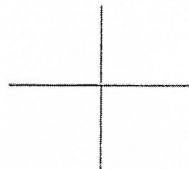
b. $270^\circ =$

c. $-120^\circ =$

Draw angles in standard position, and make "reference triangles" to find the following without using a calculator:

6. $\cos\left(\frac{-3\pi}{4}\right) =$

7. $\csc \frac{5\pi}{3} =$



A unit circle is created by letting $r = 1$ when dealing with the circular trig functions.

Then, $\sin \theta = y$, $\cos \theta = x$, and $\tan \theta = \frac{y}{x}$.

8: Use a unit circle to find:

a. $\sin \frac{\pi}{6} =$

b. $\sin 0 =$

c. $\cos 0 =$

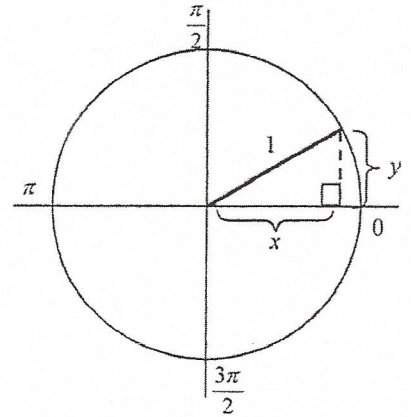
d. $\sin \frac{\pi}{2} =$

e. $\tan \left(\frac{-\pi}{2} \right) =$

f. $\tan \pi =$

g. $\csc \frac{3\pi}{2} =$

h. $\cos \frac{3\pi}{2} =$



9. Verify the Trigonometric identities

a. $(1 + \sin \theta)(1 - \sin \theta) = \frac{1}{\sec^2 \theta}$

b. $\tan^4 x + 2 \tan^2 x + 1 = \sec^4 x$

c. $\sin^2 x (\csc^2 x + \sec^2 x) = \sec^2 x$

d. $\cos^2 x \cot^2 x = \cot^2 x - \cos^2 x$