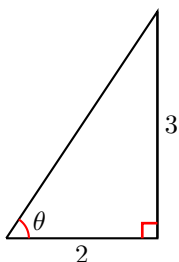


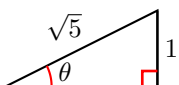
# Precalculus Homework

## Definition of the trigonometric functions and basic computations

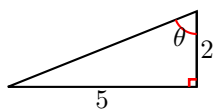
1. Find the 6 trigonometric functions of the indicated angle in the indicated right triangle.



(a)

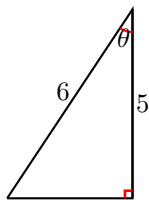


(b)



(c)

(d)



2. Find the exact value of the trigonometric function (using radicals).

(a)  $\cos 135^\circ$ .

(b)  $\sin 225^\circ$ .

(c)  $\cos 495^\circ$ .

(d)  $\sin 560^\circ$ .

(e)  $\sin\left(\frac{3\pi}{2}\right).$

(f)  $\cos\left(\frac{11\pi}{6}\right).$

(g)  $\sin\left(\frac{2015\pi}{3}\right).$

(h)  $\cos\left(\frac{17\pi}{3}\right).$

3. Find all solutions of the equation in the interval  $[0, 2\pi)$ . The answer key has not been proofread, use with caution.

(a)  $\sin x = -\frac{\sqrt{2}}{2}.$

(b)  $\cos x = \frac{\sqrt{3}}{2}.$

(c)  $\sin(3x) = \frac{1}{2}.$

(d)  $\cos(7x) = 0.$

(e)  $\cos\left(3x + \frac{\pi}{2}\right) = 0.$

(f)  $\sin\left(5x - \frac{\pi}{3}\right) = 0.$