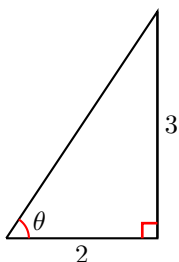


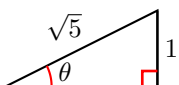
Precalculus Homework

Definition of the trigonometric functions and basic computations

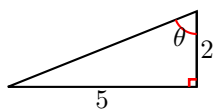
1. Find the 6 trigonometric functions of the indicated angle in the indicated right triangle.



(a)

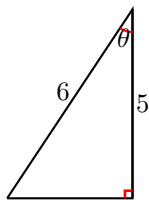


(b)



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