

Problem Set

1. Evaluate the following trigonometric expressions.

a. $\cos\left(\frac{2\pi}{3}\right) = -\frac{1}{2}$
Quad: 2

b. $\cos\left(\frac{-3\pi}{4}\right) = -\frac{\sqrt{2}}{2}$
Quad: 3

c. $\sin\left(\frac{11\pi}{6}\right) = -\frac{1}{2}$
Quad: 4

d. $\sin\left(\frac{5\pi}{3}\right) = -\frac{\sqrt{3}}{2}$
Quad: 4

e. $\tan\left(\frac{-5\pi}{6}\right) = \frac{\sqrt{3}}{3}$
Quad: 3

f. $\tan\left(\frac{-\pi}{6}\right) = -\frac{\sqrt{3}}{3}$
Quad: 4

g. $\cos\left(\frac{7\pi}{4}\right) = \frac{\sqrt{2}}{2}$
Quad: 4

h. $\sin\left(\frac{-11\pi}{6}\right) = \frac{1}{2}$
Quad: 1

i. $\cos\left(\frac{17\pi}{3}\right) = \frac{1}{2}$
 $4\pi + \frac{5\pi}{3}$ Quad: 4

j. $\cos\left(\frac{9\pi}{4}\right) = \frac{\sqrt{2}}{2}$
 $2\pi + \frac{\pi}{4}$ Quad: 1

k. $\sin\left(\frac{13\pi}{6}\right) = \frac{1}{2}$
 $2\pi + \frac{\pi}{6}$ Quad: 1

l. $\sin\left(\frac{10\pi}{3}\right) = -\frac{\sqrt{3}}{2}$
 $2\pi + \frac{4\pi}{3}$ Quad: 3

m. $\tan\left(\frac{15\pi}{6}\right) = 0$
 $2\pi + \frac{3\pi}{6}$
 $2\pi + \frac{\pi}{2}$ 1st/2nd Quad

n. $\tan\left(\frac{23\pi}{6}\right) = -\frac{\sqrt{3}}{3}$
 $2\pi + \frac{11\pi}{6}$ Quad: 4

o. $\cos\left(\frac{15\pi}{4}\right) = \frac{\sqrt{2}}{2}$
 ~~$2\pi + \frac{7\pi}{4}$~~ Quad: 4

p. $\sin\left(\frac{17\pi}{6}\right) = \frac{1}{2}$
 $2\pi + \frac{5\pi}{6}$ Quad: 2