

Trigonometry Boot Camp - Practice Exercises

All problems should be solved without the use of a calculator.

1. Evaluate each given trigonometric function of an angle.

(a) $\cos\left(\frac{2\pi}{3}\right)$

(d) $\csc\left(\frac{7\pi}{6}\right)$

(b) $\sin\left(\frac{11\pi}{2}\right)$

(e) $\cot\left(\frac{7\pi}{3}\right)$

(c) $\tan\left(-\frac{3\pi}{4}\right)$

(f) $\sec\left(-\frac{9\pi}{4}\right)$

2. Find all values of θ in the given range that satisfy the given equation.

(a) $\sin \theta = -\frac{1}{2}, \quad 0 \leq \theta \leq 2\pi$

(b) $\sec \theta = \sqrt{2}, \quad 0 \leq \theta \leq 2\pi$

(c) $\tan \theta = \sqrt{3}, \quad -\pi \leq \theta \leq \pi$

3. Find all values of x , where $0 \leq x \leq 2\pi$, that satisfy the given equation.

(a) $4 \sin^2 x - 3 = 0$

(b) $\sin x + 1 = 2 \cos^2 x$

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

(d) $\cos 2x = \cos x - 1$