

Solving Trig Equations I

1. Find *all* solutions to the following equations.

(a) $\cos t = \frac{-\sqrt{3}}{2}$

(b) $\csc t = 2$

(c) $\cot t = -1$

(d) $\sin t = -1$

(e) $\tan t = \sqrt{3}$

2. Find all solutions in the interval $[0, 2\pi]$ to the following equations (or explain why no solution exists).

(a) $\sqrt{2} \cos t = -1$

$$(b) \frac{3 + 2 \sin t}{5} = \sin t$$

$$(c) 1 = \frac{1 + 3 \cos t}{5 \cos t - 2}$$

$$(d) \frac{6 \sec t + 2}{2 \sec t - 1} = 2$$