

Quiz 9

Due: 5 November 2024

Answer the questions in the spaces provided. **Show all of your work and circle the answer you would like to have graded for each question.**

Name: _____

1. According to OSHA safety regulations, the proper angle for setting up a ladder is to place it 1 foot away from the wall for every 4 feet of ladder length. Find the recommended working angle for a ladder of length x . Click here for more details.
(This aims to correct an inaccurate claim that I made in class.)

2. Find **all** exact solutions to each of the following equations:

a.) $\sec^2 x - 4 = 0$;

b.) $2 \sin(\pi\theta) + 1 = 0$.

3. Find **all** exact solutions to each of the following equations:

a.) $\cos^3(x) = \cos(x)$;

b.) $\tan(x) = 3 \sin(x)$;

c.) $2 \cos(3\theta) = \sqrt{2}$;

4. Find the exact solution(s) between 0 and 2π satisfying $\cos^2(x) = 2 \sin(x) + 2$.