



Gator Golf

Round 2

Work with your group to come up with complete solutions to the problems you selected. Write these up neatly, as indicated, on the whiteboard. Get exact answers whenever possible. Problems will be presented in order from 1 to 10.

1. Find the values of:

a) $\sin\left(\frac{\pi}{3}\right)$ b) $\sec\left(\frac{27\pi}{4}\right)$ c) $\cos\left(-\frac{3\pi}{4}\right)$ d) $\tan\left(-\frac{117\pi}{6}\right)$

2. Solve for x within the given domain:

$$\cos\left(3x - \frac{\pi}{4}\right) = \frac{1}{2}, x \in [-\pi, \pi]$$

3. Solve for x within the given domain: $\tan^2(2x) = 3, x \in [-2\pi, 3\pi]$

4. Solve for x within the given domain: $6\cos^2(x) = 5\sin(x) + 7, x \in [0, 2\pi]$

5. If $\cos\Omega = \frac{4}{5}$ and $-\frac{\pi}{2} < \Omega < 0$, find:

a) $\cos(-\Omega)$ b) $\cos(\pi + \Omega)$ c) $\tan(\Omega)$ d) $\sin\left(\frac{\pi}{2} - \Omega\right)$

6. Find an equation of a function using sine that has a maximum at $\left(\frac{\pi}{4}, 5\right)$ and its next minimum at $\left(\frac{5\pi}{6}, 1\right)$

7. Find an equation of a function using sine that has a period of 8π , a range of $[-4, 2]$, and contains the point $\left(\frac{\pi}{2}, \frac{1}{2}\right)$.

8. Solve for x : $\tan^2(x) + 3\cot^2(x) = 4$

9. Solve for x within the given domain: $\cos\left(2x - \frac{\pi}{3}\right) = \frac{1}{2}$, if $3\pi < x < 4\pi$

10. Given that $\cos(\Omega) = m, \frac{\pi}{2} < \Omega < \pi$, find each of the following in terms of m .

a) $\sin(\Omega)$ b) $\cos(\pi - \Omega)$ c) $\tan(\Omega)$ d) $\cos\left(\frac{3\pi}{2} + \Omega\right)$