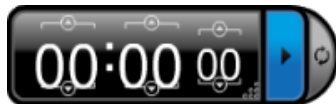


## Group Quiz Instructions

1. Every group member must complete all problems on her/his quiz.
2. Everyone in your group must work on the same problem together, one at a time.
3. Talk quietly in your groups; no intra-group discussions.
4. Write the number (1, 2, 3, or 4) next to your name on the SMARTBoard on your quiz paper.
5. *Play nicely!*



Math 4 Honors

Lessons  
4-1 & 4-2

Practice Quiz

Name \_\_\_\_\_

Date \_\_\_\_\_

*NO CALCULATORS!!!*

Evaluate the following:

1.  $\sin\left(\frac{5\pi}{6}\right) =$

$$\frac{1}{2}$$

2.  $\tan\left(\frac{3\pi}{4}\right) =$

$$-1$$

3.  $\sin\left(-\frac{2\pi}{3}\right) =$

$$-\frac{\sqrt{3}}{2}$$

4.  $\cos\left(\frac{5\pi}{2}\right) =$

$$0$$

Solve for primary values:

5.  $-2\cos^2 x + 3\sin x = 0$

$$-2(1 - \sin^2 x) + \sin x = 0$$

$$-2 + 2\sin^2 x + \sin x = 0$$

$$2\sin^2 x + \sin x - 2 = 0$$

$$(2\sin x - 1)(\sin x + 2) = 0$$

$$\downarrow \quad \sin x = -2$$

$$\sin x = \frac{1}{2}$$
$$x = \frac{\pi}{6}, \frac{5\pi}{6}$$

7.  $\csc x = -1$

$$\frac{1}{\sin x} = -1$$

$$\sin x = -1$$

$$x = \frac{3\pi}{2}$$

6.  $2\cos^2 x \tan x - \tan x = 0$

$$\tan x (2\cos^2 x - 1) = 0$$

$$\tan x = 0 \quad 2\cos^2 x = 1$$

$$\therefore = 0, \pi, 2\pi$$

$$\sqrt{\cos^2 x} = \sqrt{\frac{1}{2}}$$

$$\cos x = \pm \frac{1}{\sqrt{2}}$$

$$x = \frac{\pi}{4}, \frac{3\pi}{4}, \frac{5\pi}{4}, \frac{7\pi}{4}$$

Verify the following identities.

$$8. \sin \theta \tan \theta = \frac{1}{\cos \theta (\cot^2 \theta + 1)}$$

$$\begin{aligned} \sin \theta \cdot \frac{\sin \theta}{\cos \theta} &= \frac{1}{\cos \theta} \cdot \frac{1}{\csc^2 \theta} \\ \checkmark \frac{\sin^2 \theta}{\cos \theta} &= \frac{1}{\cos \theta} \cdot \frac{\sin^2 \theta}{1} \\ &= \frac{\sin^2 \theta}{\cos \theta} \quad \checkmark \end{aligned}$$

Identity Checklist:

1. All work is shown.
2. Work is neat.
3. Work has been done vertically and the equals sign has not been crossed over.
4. Final step shows Left side = Right side.

$$9. \cos \theta + \tan \theta \sin \theta = \sec \theta \quad \checkmark$$

$$\cos \theta + \frac{\sin \theta}{\cos \theta} \cdot \frac{\sin \theta}{1} =$$

$$\frac{\cos \theta}{1} + \frac{\sin^2 \theta}{\cos \theta} =$$

$$\frac{\cos^2 \theta + \sin^2 \theta}{\cos \theta} =$$

$$\frac{1}{\cos \theta} =$$

$$\checkmark \sec \theta =$$