PreCalculus
Quiz

Your Name:

*You **may not** use a calculator for this quiz.*

1. Simplify the expression.

$$\tan x \sin\left(\frac{\pi}{2} - x\right)$$

(2-4) Verify (prove) the identity. Show all work and justify steps if necessary.

2. $\sin x\,(\cot x + \tan x) = \sec x$

3. $\dfrac{1 + \sec x}{\sec x} = \dfrac{\sin^2 x}{1 - \cos x}$

4. $\cos(-x) - \tan(-x) = \cos x + \tan x$

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5. Evaluate using the Pythagorean identities. Show all work.

Find $\sin\theta$ and $\cos\theta$ if $\tan\theta = 1/5$ and $\sin\theta < 0$.

(6-8) Solve.

6. $2\sin x + \tan x = 0$

7. $\sin 5x = 1$

8. $2\cos^2 x = 5\cos x - 2$