Math 109, Practice Quiz 4: Fundamental Trig. Identities

Name: Amy **Section:** _____

You have 5 minutes to complete the following problems, without using your notes, book, or calculator.

1. Use a reciprocal identity or a quotient identity to write the functions in terms of sine and/or cosine.

$\tan\theta = \frac{\sin\theta}{\cos\theta}$ $\quad\quad$ $\cot\theta = \frac{\cos\theta}{\sin\theta}$

$\sec\theta = \frac{1}{\cos\theta}$ $\quad\quad$ $\csc\theta = \frac{1}{\sin\theta}$

2. State the three Pythagorean identities.

$\sin^2\theta + \cos^2\theta = 1$

$\tan^2\theta + 1 = \sec^2\theta$

$1 + \cot^2\theta = \csc^2\theta$

3. State the cofunction identities.

$\cos\left(\frac{\pi}{2}-\theta\right) = \sin\theta$ $\quad\quad$ $\cot\left(\frac{\pi}{2}-\theta\right) = \tan\theta$ $\quad\quad$ $\sec\left(\frac{\pi}{2}-\theta\right) = \csc\theta$

4. State the even/odd identities.

$\csc(-\theta) = -\csc\theta$ $\quad\quad$ $\sin(-\theta) = -\sin\theta$ $\quad\quad$ $\cot(-\theta) = -\cot\theta$