Trig Derivatives Quiz

Name: _____ Due Date: June 2, 2020

1. Compute the following limit
$$\lim_{x \to 0} 6x^2 \cdot \cot x \cdot \csc 2x$$

2. Show
$$\frac{d}{dx} \sin x = \cos x$$

3. Why does it matter to use radians when computing trig derivatives?

4. Evaluate the following

   (a) Find dy/dx if $x = \tan(\csc^2(y))$

   (b) $\displaystyle\int_0^{\pi/2} \frac{\sin x}{(3 + 2\cos x)^2}\,dx$