Quiz 10 — 21 November 2019

Answer the questions in the spaces provided. **Show all of your work and circle the answer you would like to have graded for each question.**

Name and section:_____

1. Find the exact value of $\csc\left(\frac{\pi}{4}\right) - \cos^2\left(\frac{\pi}{4}\right)\csc\left(\frac{\pi}{4}\right)$.

2. Find the exact value of $\ln\left|\sec\left(\frac{3\pi}{4}\right)\right| + \ln\left|\sin\left(\frac{3\pi}{4}\right)\right|$.

3. Verify the identity $(1+\sin u)(1+\sin(-u)) = \cos^2 u$.

4. Simplify the expression
$$\frac{1-\cos^2 x}{\sec^2 x - 1}.$$