Quiz 9
Due: 9 April 2024

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: $\qquad$

1. Use a double angle formula to compute $4 \sin \left(\frac{\pi}{8}\right) \cos \left(\frac{\pi}{8}\right)$ by hand.
2. Use a half angle formula to compute $\cos \left(\frac{7 \pi}{8}\right)$ by hand.
3. Suppose $\sin (x)=-\frac{12}{13}$ and $\pi<x<\frac{3 \pi}{2}$. Compute both $\cos \left(\frac{x}{2}\right)$ and $\sin (2 x)$ by hand.
4. Use the figure to compute each of the following: (You do not need to simplify your answers.)
a.) $\tan (2 \alpha)$;

c.) $\sin (4 \alpha)$.
