

Math 130 - Quiz 8 TH

October 23, 2019

Name _____

Score _____

Show all work to receive full credit. Supply explanations when necessary. You must work individually on this quiz. This quiz is due October 28.

1. (3 points) Given that θ is a 2nd quadrant angle with $\sin \theta = 5/13$, determine the exact values of $\sin(\theta/2)$ and $\cos(\theta/2)$.

2. (3 points) Find the solutions in the interval $[0, 2\pi)$: $\cos 2x - \cos 6x = 0$

3. (3 points) Verify the trigonometric identity: $(\sin x + \cos x)^2 = 1 + \sin 2x$

Turn over.

4. (6 points) Solve the triangle. If two solutions exist, find both.

$$\alpha = 58^\circ, \quad a = 11.4, \quad b = 12.8$$