MATH 19501 Quiz 20 - Winter 25

Name: _____ EMPLID: _____

Answer all 4 questions. You must show all of your work as neatly and clearly as possible and indicate the final answer in the provided region for each non-graph question. For all graph questions, you should sketch your graph on the grid provided.

1. (8 points) Find the exact value of each expression.

(a) (4 points) $\sin 8^\circ \cos 22^\circ + \cos 8^\circ \sin 22^\circ$ Write your answer in the box below:

(b) (4 points) $\cos 15^\circ$ Write your answer in the box below:

2. (4 points) Find $\cos 2x$, if $\sin x = \frac{5}{13}$, x in Quadrant I.

Write your answer in the box below:

3. (4 points) Solve the trigonometric equation $\sqrt{2}\cos\theta - 1 = 0$, for all values of θ on the interval $0 \leq \theta \leq 2\pi$.

Write your answer in the box below:

4. (4 points) Find an equation of the circle that has Center: $(-1, 5)$ and passes through the point $(4, 7)$.

Write your answer in the box below: