

Calculus II

Name: _____

Study Guide 24

Class: _____

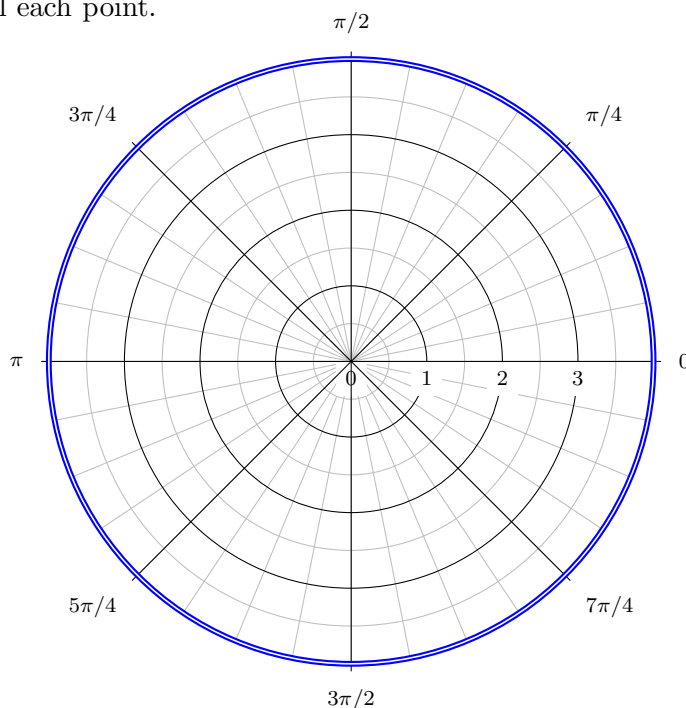
Due Date: _____

Score: _____

No Work \Leftrightarrow No Points

Use Pencil Only \Leftrightarrow Be Neat & Organized

1. (5 points) Plot the polar points $(3, 90^\circ)$, $(-3, 270^\circ)$, $(-3, -90^\circ)$, $(3, -270^\circ)$, $(3, 450^\circ)$, $(3, -450^\circ)$ below. Clearly label each point.



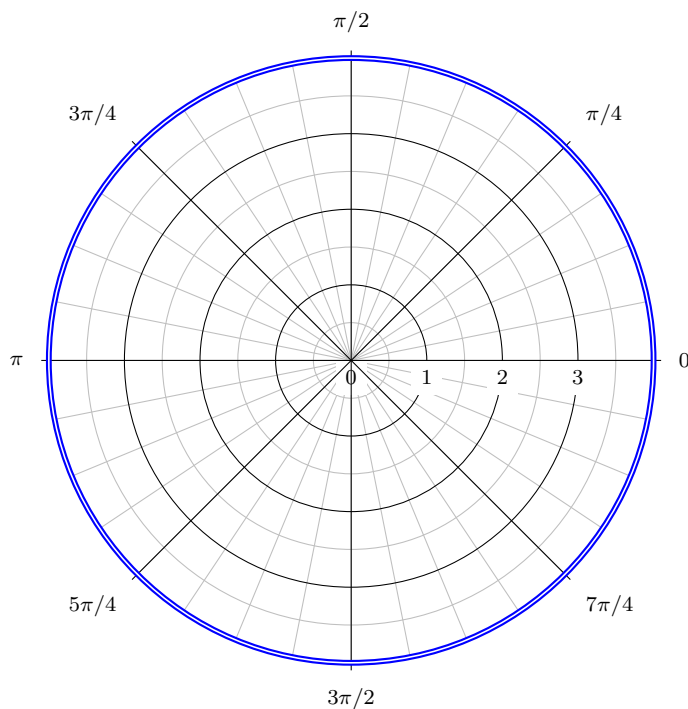
2. (3 points) Convert the polar point $(-4\sqrt{2}, -45^\circ)$ to a rectangular coordinate point.

2. _____

3. (3 points) Convert the polar equation $r = 4 \cos \theta - 6 \sin \theta$ to a rectangular equation.

3. _____

4. (6 points) Draw the polar equations $r = 3$, $r \sin \theta = 3$, $r = -3 \sec \theta$ below. Clearly label each graph.



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5. (3 points) Convert the rectangular point $(-4, -4)$ to a polar coordinate point.

5. _____

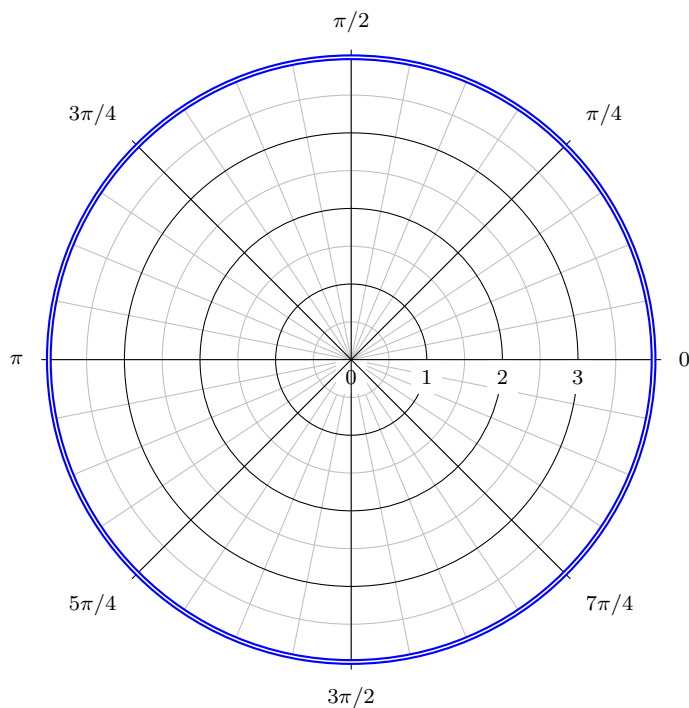
6. (4 points) Convert the rectangular equation $y = \sqrt{3}x$ to a polar equation.

6. _____

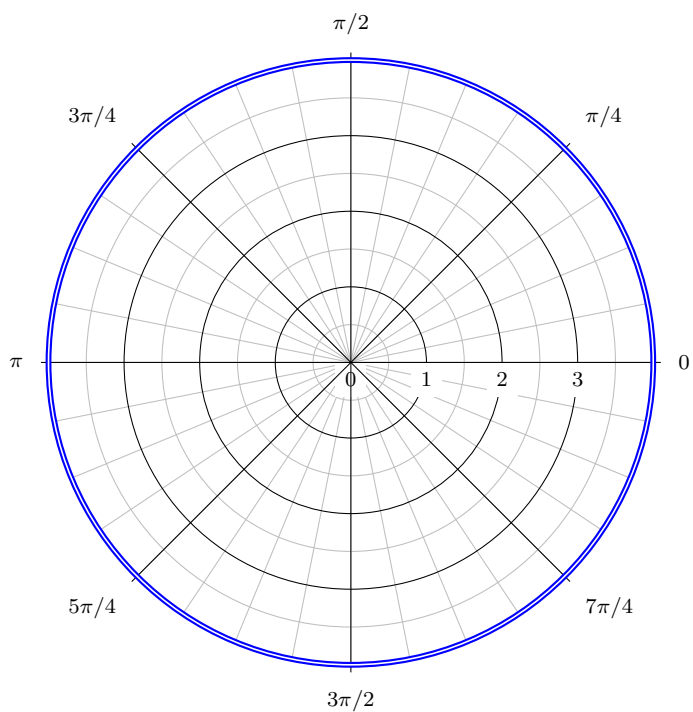
7. (4 points) Convert the polar equation $r = \frac{12}{4 \sin \theta - 3 \cos \theta}$ to a rectangular equation.

7. _____

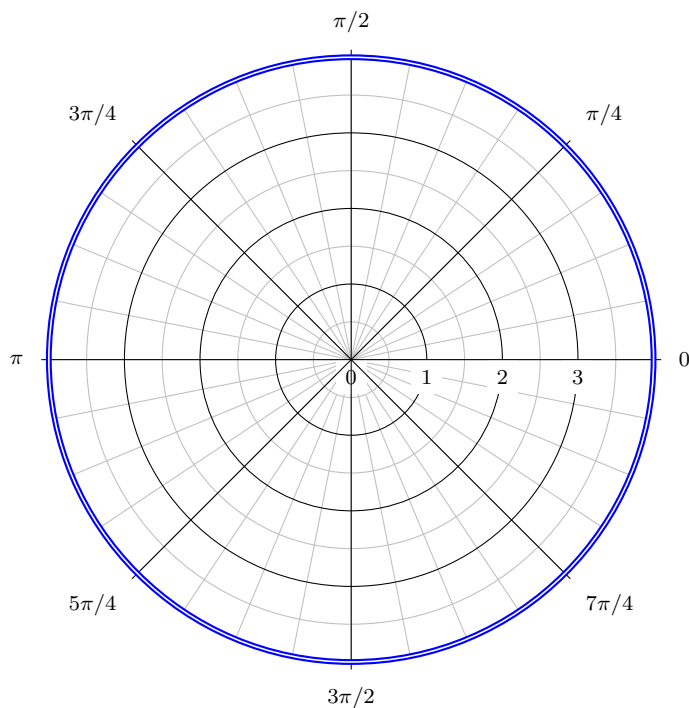
8. (6 points) Draw $r = 1 - 2 \sin \theta$. Show your work in details and clearly label all important points.



9. (6 points) Draw $r = 1 + 2 \cos \theta$. Show your work in details and clearly label each important points.



10. (5 points) Graph $r = 2$, $r = 2 \cos \theta$, and $r = -2 \sin \theta$ below.



11. (5 points) Graph $\theta = \pi/4$, $\theta = 3\pi/2$, and $\theta = \pi$ below.

