

Calculus II

Name: \_\_\_\_\_

Study Guide 25

Class: \_\_\_\_\_

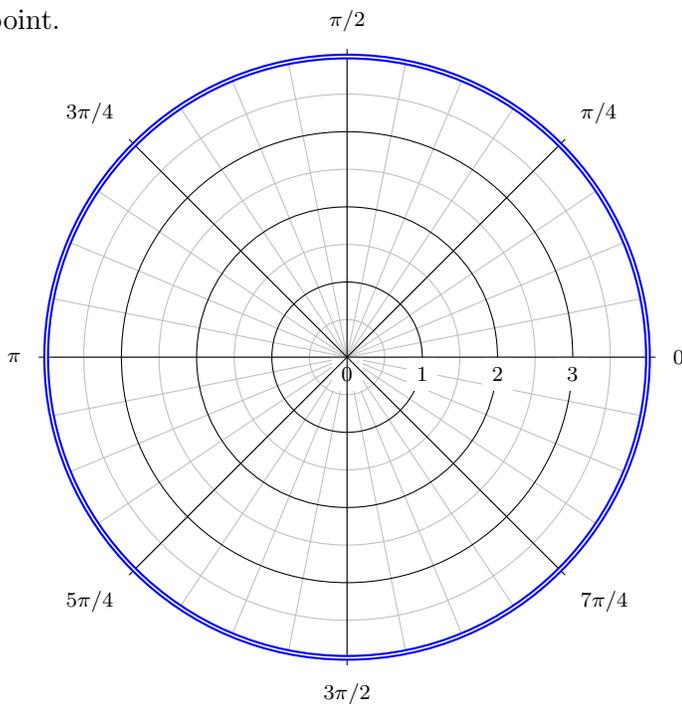
Due Date: \_\_\_\_\_

Score: \_\_\_\_\_

No Work  $\Leftrightarrow$  No Points

Use Pencil Only  $\Leftrightarrow$  Be Neat & Organized

1. (5 points) Plot the polar points  $(2, 0)$ ,  $(-2, \pi/4)$ ,  $(3, 3\pi/4)$ ,  $(-3, 5\pi/4)$ ,  $(4, 7\pi/4)$ ,  $(2, \pi)$  below. Clearly label each point.



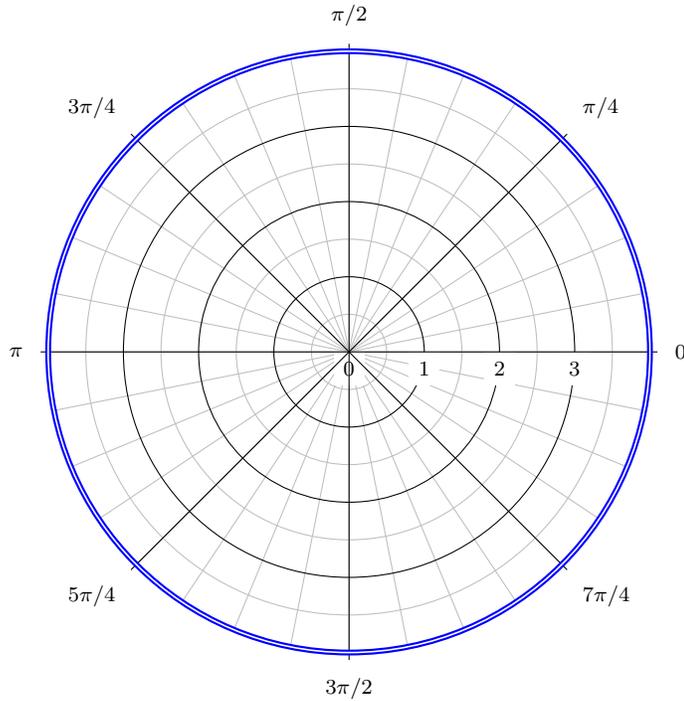
2. (3 points) Convert the polar point  $(-6, \pi/3)$  to a rectangular coordinate point.

2. \_\_\_\_\_

3. (3 points) Convert the polar equation  $r = 4$  to a rectangular equation.

3. \_\_\_\_\_

4. (6 points) Draw the polar equations  $r = 2$ ,  $r \cos \theta = 3$ ,  $r = -2 \csc \theta$  below. Clearly label each graph.



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5. (3 points) Convert the rectangular point  $(-6, 2\sqrt{3})$  to a polar coordinate point.

5. \_\_\_\_\_

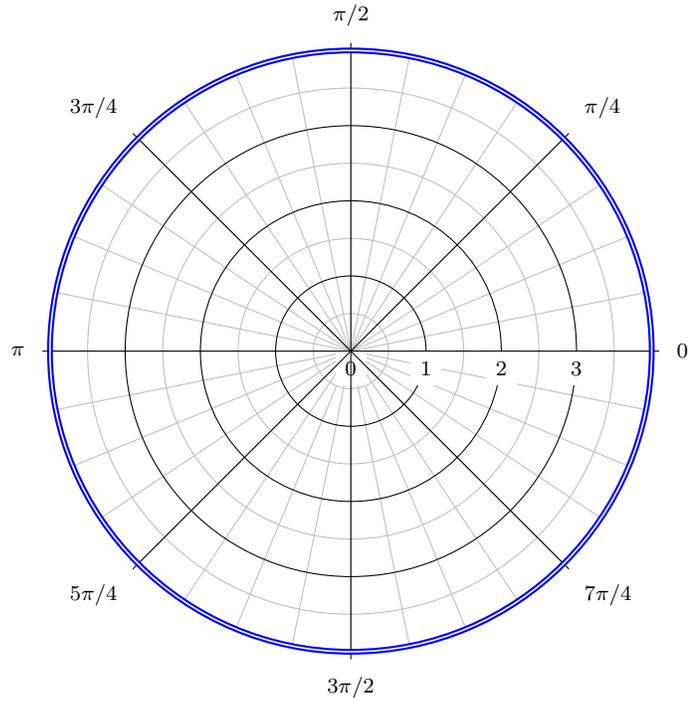
6. (3 points) Convert the rectangular equation  $2x - 3y = 6$  to a polar equation.

6. \_\_\_\_\_

7. (3 points) Convert the polar equation  $r = 6 \sin \theta$  to a rectangular equation.

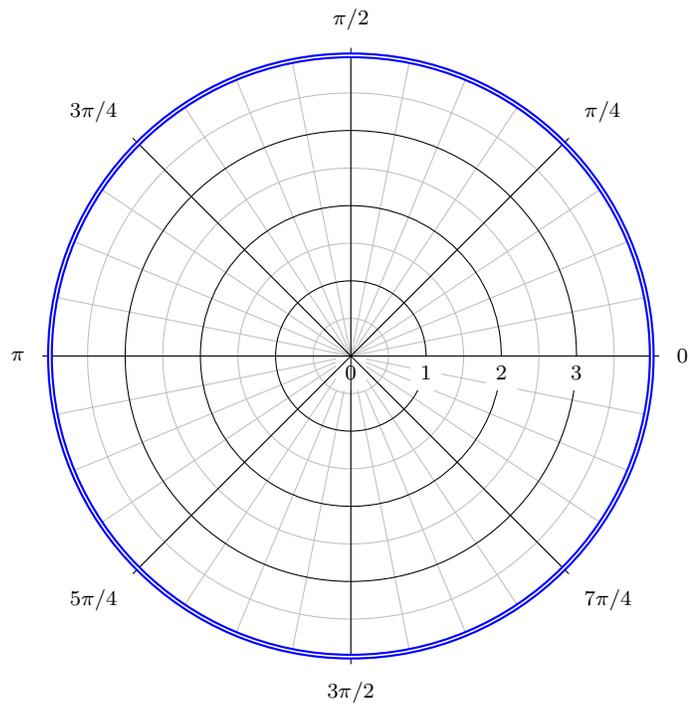
7. \_\_\_\_\_

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

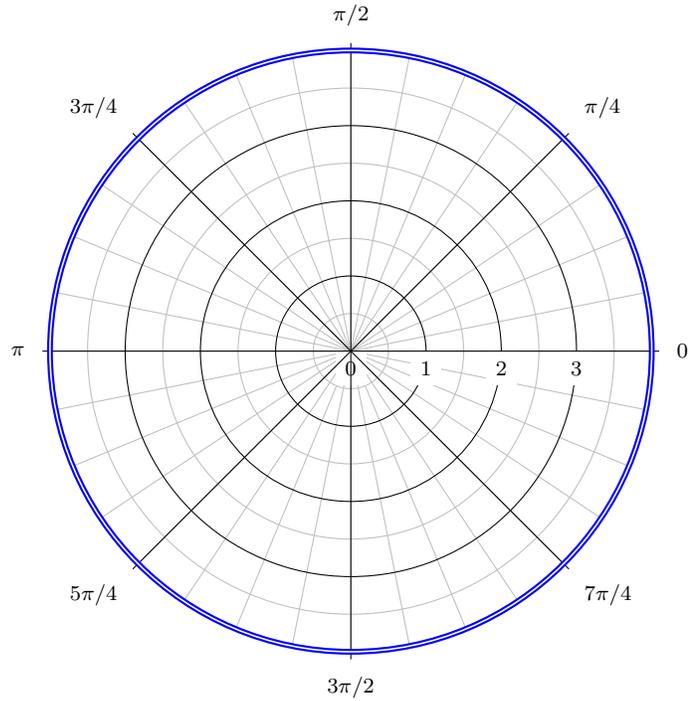


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9. (6 points) Draw  $r = 1 + 2 \cos \theta$ . Show your work in details and clearly label each important points.



10. (6 points) Draw  $r = 3 \sin 2\theta$ . Show your work in details and clearly label all important points.



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11. (6 points) Draw  $r = 2 \cos 3\theta$ . Show your work in details and clearly label each important points.

