

Name: _____ Section: _____

Answer all questions and show your work. Unsupported answers may receive *no credit*. You may not use a calculator on this quiz. Allow 15 minutes for the quiz.

1. (5 points) Consider the polar curve $r = 2 \sin(3\theta)$. Find the area enclosed by one leaf of the curve.

2. Consider the ellipse $\frac{(x-1)^2}{4} + \frac{(y+2)^2}{9} = 1$.

- (a) (3 points) Find the vertices of the ellipse.
- (b) (2 points) Give the lengths of the major and minor axes.