Name: ————————————————————   **Section**: ——————————

Clear your desk of everything except pens, pencils and erasers. **Show all your work.**
If you have a question raise your hand and I will come to you.

1. (4 points) Find the area enclosed by $x = 2\cos t$, $y = 3\sin t$, $0 \le t \le 2\pi$.

   Answer: 6π

   (2 points for setting up the integral: $A = 4\int_{\pi/2}^{0} 3\sin t(-2\sin t)dt$ and 2 points for the correct answer.)

2. (3 points) Draw the curve for polar equation $r = 2\cos\theta$

   Answer: It is circle of radius 1 centered at point $(r, \theta) = (1, 0)$.

   (3 points for the correct picture)

3. (3 points) Find the area enclosed by polar equation $r = 2$.

   Answer: 4π

   (2 points for setting up the integral: $A = \int_{0}^{2\pi} \frac{1}{2}r^2 d\theta$ and 1 point for the correct answer.)