Quarter 4 Spiral Review 5 Precalculus **Due Friday, May 6**

1. Identify the rectangular coordinates for the given polar coordinates: $\left(8, \frac{\pi}{3}\right)$

2. Identify the polar coordinates for the given rectangular coordinates: $\left(4, -4\sqrt{3}\right)$

3. Identify the Rectangular Equation for the given polar equation:

$$r = 14$$

4. Identify the Polar equation for the given rectangular equation:
$(x - 11)^2 + (y)^2 = 121$

5. Is this series convergent or divergent? $\sum_{n=1}^{\infty} \frac{n}{\sqrt{n^3 + 1}}$

6. What is the explicit formula for the arithmetic sequence :
$177, 160, 143, \ldots$

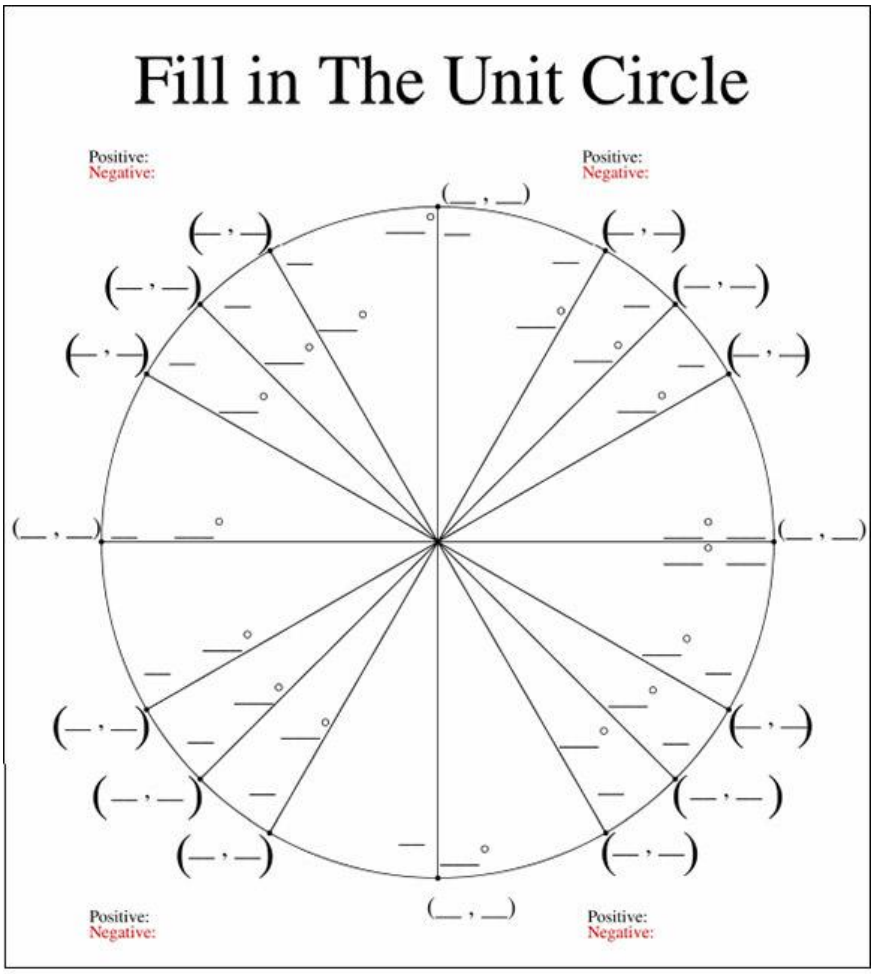
7. Write the parametric equations as a rectangular equation:

$$x = 3t; y = 4t^2 - 7t + 1$$

8. Write the polar complex number in rectangular form:

$$6\left(\cos\frac{5\pi}{3}+i\sin\frac{5\pi}{3}\right)$$

9. Fill in the blank Unit Circle: {degrees, radians, ordered pairs}



10. Write the complex number in polar form: $-6\sqrt{3}+6i$