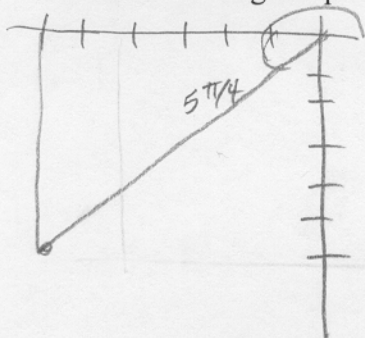


Each problem is worth 5 points. Clear and complete justification is required for full credit.

1. Convert the rectangular point  $(-6, -6)$  to polar coordinates.



$$r = \sqrt{6^2 + 6^2} = \sqrt{72} = 6\sqrt{2}$$

$$\theta = \frac{5\pi}{4} + 2n\pi$$

$$\tan \theta = 1$$

$$\left( 6\sqrt{2}, \frac{5\pi}{4} \right)$$

Great

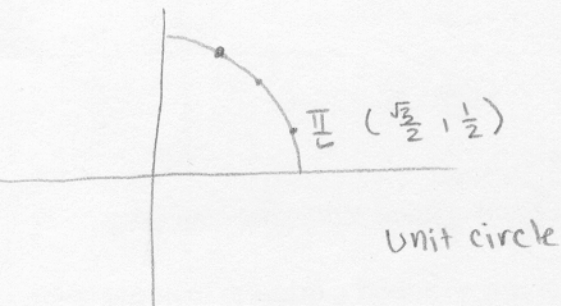
$$\begin{array}{r} 7036 \\ \times 2 \\ \hline 14072 \end{array}$$

2. Convert the polar point  $(10, \pi/6)$  to rectangular coordinates.

$$x = r \cos \theta = 10 \cdot \cos \frac{\pi}{6} = 10 \cdot \frac{\sqrt{3}}{2} = 5\sqrt{3}$$

$$y = r \sin \theta = 10 \sin \frac{\pi}{6} = 10 \cdot \frac{1}{2} = 5$$

$$\left( 5\sqrt{3}, 5 \right)$$



Excellent