10.2 #10

$(x, y) = (\sqrt{3}, -1)$ ~ in quadrant IV

$r^2 = x^2 + y^2$. Since $r > 0$, $r = \sqrt{x^2+y^2} = \sqrt{3+1} = 2$

$\tan\theta = \frac{-1}{\sqrt{3}}$

Since we want quadrant IV, use

$\theta = \frac{11\pi}{6}$ or $\theta = \frac{-\pi}{6}$

So we have $(2, \frac{11\pi}{6})$ or $(2, \frac{-\pi}{6})$