

14.  $(-0.2, -3.4)$   
 $\begin{matrix} x \\ y \end{matrix}$

①  $r = \sqrt{(-0.2)^2 + (-3.4)^2}$

$r = \sqrt{.04 + 11.56}$

$r = 3.405877073$

$r = 3.41$

②  $\cos \theta = \frac{x}{r} = \frac{-0.2}{3.41}$

FAILS

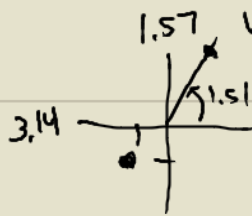
③  $\tan \theta = \frac{y}{x}$

$\theta = \tan^{-1}\left(\frac{y}{x}\right)$

$\theta = \tan^{-1}\left(\frac{-3.4}{-0.2}\right)$

$\theta = 1.51$

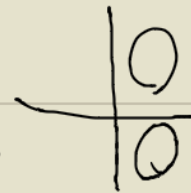
NOTE: WHEN USING  
 $\tan \theta = \frac{y}{x}$  FORMULA  
 CHECK QUADRANTS



So  $\theta = 1.51 + \pi$

$\theta = 4.65$

$(3.41, 4.65)$



15.  $(-1.9, 0.15)$   
 $\begin{matrix} x \\ y \end{matrix}$

①  $r = \sqrt{x^2 + y^2}$

$r = \sqrt{(-1.9)^2 + (0.15)^2}$

$r = 1.91$

② FAIL

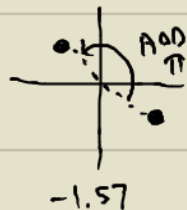
③  $\theta = \tan^{-1}\left(\frac{y}{x}\right)$

$\theta = \tan^{-1}\left(\frac{0.15}{-1.9}\right)$

$\theta = -.078783961$

$\theta = -.078783961 + \pi$

$\theta = 3.06$



$(1.91, 3.06)$