

2. $\csc(\tan^{-1}(-\sqrt{3}))$

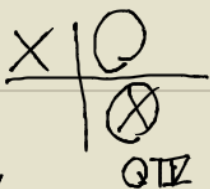
① $\rho = \tan^{-1}(-\sqrt{3})$

② $\tan \rho = \tan(\tan^{-1}(-\sqrt{3}))$

$\rightarrow \tan \rho = -\sqrt{3}$

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

③ $\tan \rho = \frac{-\sqrt{3}}{1}$ AND $\tan = \frac{y}{x}$
 $y = -\sqrt{3}, x = 1$



$r^2 = x^2 + y^2$

$r^2 = 1^2 + (-\sqrt{3})^2$

$r^2 = 1 + 3$

$r^2 = 4$

$r = \pm\sqrt{4}$

$r = 2$

④ $\csc = \frac{r}{y}$

$\frac{2}{-\sqrt{3}}$

$\frac{-2\sqrt{3}}{3}$

3. $\sec(\tan^{-1}(-5))$

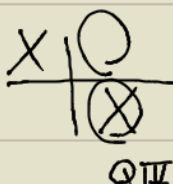
① $\rho = \tan^{-1}(-5)$

② $\tan \rho = \tan(\tan^{-1}(-5))$

$\tan \rho = -5$

③ $\tan \rho = \frac{-5}{1}$ AND $\tan = \frac{y}{x}$

so $y = -5, x = 1$



$r^2 = x^2 + y^2$

$r^2 = (1)^2 + (-5)^2$

$r^2 = 1 + 25$

$r^2 = 26$

$r = \sqrt{26}$

④ \sec is $\frac{x}{r}$

$\frac{1}{\sqrt{26}} = \frac{\sqrt{26}}{26}$

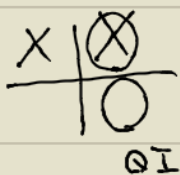
5. $\cos(\sin^{-1}(\frac{\sqrt{3}}{7}))$

① $\rho = \sin^{-1}(\frac{\sqrt{3}}{7})$

② $\sin \rho = \sin(\sin^{-1}(\frac{\sqrt{3}}{7}))$

$\sin \rho = \frac{\sqrt{3}}{7}$

③ $\sin \rho = \frac{\sqrt{3}}{7}$ AND $\sin = \frac{y}{r}$



so $y = \sqrt{3}, r = 7$

$x^2 + y^2 = r^2$

$x^2 + (\sqrt{3})^2 = (7)^2$

$x^2 + 3 = 49$

$x^2 = 49 - 3$

$x^2 = 46$

$x = \pm\sqrt{46}$

$x = \sqrt{46}$

④ \cos is $\frac{x}{r}$

$\frac{\sqrt{46}}{7}$