

Take your time and think Show your work in detail. Have a good scan

a) Given $(x=4, y=9)$ find the representation of this in Polar (r, θ) and then in complex both polar and rectangular

b) Given $5e^{-j\frac{7\pi}{4}}$ find the equivalent in (r, θ) and (x, y) and show your work

c) Here is an interesting thing to think about if a complex number is $a+jb$ and $a=0$ and $b=-j$ what is the exponential form of this
a. Remember $re^{j\theta} = r\cos(\theta) + jr\sin(\theta)$