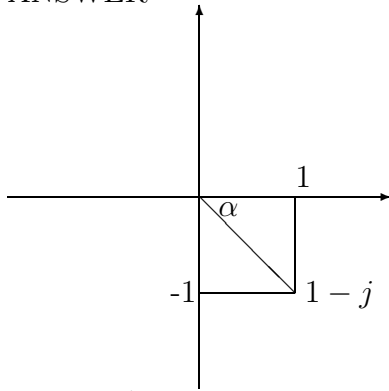QUESTION
Write $z = 1 - j$ in exponential form.

ANSWER

$\tan \alpha = \dfrac{1}{1} = 1, \ \alpha = \dfrac{\pi}{4}, \ r = \sqrt{(1^2 + (1)^2)} = \sqrt{2}$ therefore $1 - j = \sqrt{2}e^{-j\frac{\pi}{4}}$