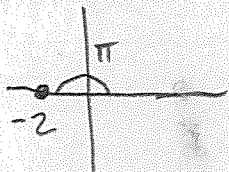
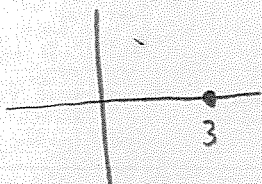


Quiz 1 MATH 1199 Fall 2019

Use polar form to multiply $z_1 = -2$ and $z_2 = 3$.

Soln:  $\Rightarrow z_1 = 2e^{i\pi}$

 $\Rightarrow z_2 = 3e^{0i}$

Therefore,

$$\begin{aligned} z_1 z_2 &= (2e^{i\pi})(3e^{0i}) = 6e^{i\pi} = -6 \\ &= \underbrace{6}_{r} e^{i\pi} \\ &= r(\cos(\pi) + i\sin(\pi)) \\ &= -6 + 0i \\ &= -6 \end{aligned}$$