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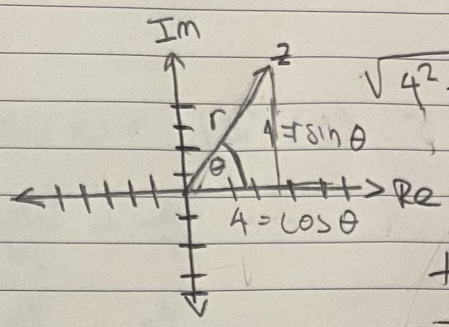
Quiz 1

1. $z = 4 + 4j$



$\sqrt{4^2 + 4^2} = \sqrt{36}$

$r = \sqrt{6}$

$\tan\theta\left(\frac{b}{a}\right)$ $\tan^{-1}\left(\frac{b}{a}\right) = \theta$

$-\pi < \theta \leq \pi$.

$z = \sqrt{6}(\cos(1) j\sin(1) = 0.04274298$

2. $z = 1$, $z = j$, $z = -1$, $z = -j$

$z = r\cos\theta + r\sin\theta \Rightarrow z = e^{j(0)}$

$z = j$

$z = -1$

$z = r\cos\theta + r\sin\theta = z = e^{j(0)}$

$z = -j$

rectangular form

1. $z = 2\exp(j\pi/4)$

$r = |2| \angle \pi/4$

Cartesian coordinate $= (\sqrt{2}, -\sqrt{2})$

2. $z = 5\exp(j\pi)$

$r = |5| \angle \pi$

Cartesian coordinate = ?