

PROBLEM:

Simplify the following complex-valued expressions. Give your answer in polar form. Reduce the answers to a simple numerical form.

- (a) For $z = -3 + j3$, evaluate $1/z$.
- (b) For $z = -3 + j3$, evaluate z^5 .
- (c) For $z = -3 + j3$, evaluate $|z|^2$.
- (d) For $z = -3 + j3$, evaluate $\Re\{ze^{-j\pi/2}\}$.