

PROBLEM:

Simplify the following complex-valued expressions. Reduce the answers to a **simple** numerical form.

- (a) For $W = -3 + j\sqrt{3}$, express the conjugate W^* in **polar form**. In addition, **plot** W^* as a vector.
- (b) For $U = -1 + j$, express the inverse U^{-1} in **rectangular form**. In addition, **plot** U^{-1} as a vector.
- (c) For $Z = j(1 - j)^3$, express Z in **polar form**. In addition, **plot** Z as a vector.
- (d) For $V = 3je^{-j\pi/3}$, express $\Re\{Ve^{j7\pi t}\}$ as a sinusoid in the standard “cosine” form.