

PROBLEM:

Simplify the following complex-valued expressions. Draw a vector diagram for these expressions. Give the answers in *both* Cartesian and polar form.

(a) $e^{j\pi/4} + e^{j3\pi/4}$, evaluate the sum.

(b) $e^{j\pi/3} (e^{j\pi/2} + e^{j\pi})$, evaluate the expression.