

PROBLEM:

Solve the following complex number equations:

- (a) Solve for $y[n]$ in the following equation by drawing a phasor diagram.

$$y[n] = \cos(2\pi n/3) + 2 \cos(2\pi(n - 5)/3)$$

Express $y[n]$ in the form $y[n] = A \cos(\omega_0 n + \phi)$

- (b) Determine all the solutions of the following polynomial equation:

$$1 + 16z^{-4} = 0$$