

## PROBLEM:

Suppose that a discrete-time signal  $x[n]$  is given by the formula:

$$x[n] = 4 \cos(0.4\pi n + \pi/4)$$

and that it was obtained by sampling a continuous-time signal  $x(t)$  at a rate of 3000 samples/sec. Determine two different analog signals that could have produced  $x[n]$ . Both of these analog signals should have a frequency less than 3 kHz. Write the mathematical formula for both.