1. Given continuous time signal $x(t) = 2\cos(6t)$ sampled at a sampling frequency of f_s, evaluate to a number the discrete time signal x[n] for n=0, 1, 2 if:

   a. $f_s = \frac{2}{\pi}$ Hz

   b. $f_s = \frac{1}{2\pi}$ Hz

2. Given discrete time signal $x[n] = \begin{cases} 0, & n < 0 \\ 1, & n \geq 0 \end{cases}$ and the system below, find y[n] for n=0, 1, 2, and 3.