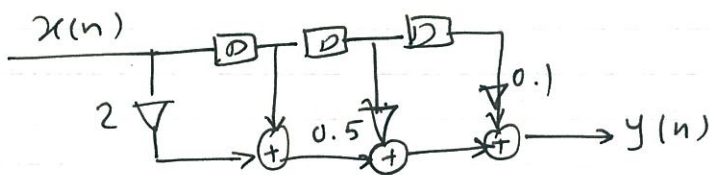
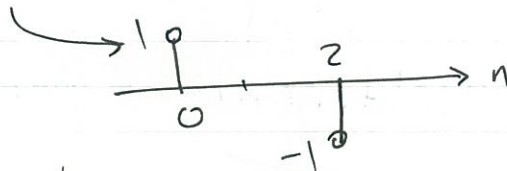


1.9 (a), (b)



$$y(n) = 2x(n) + x(n-1) + 0.5x(n-2) + 0.1x(n-3)$$

Q If input $x(n) = \delta(n) - \delta(n-2)$



Calculate output samples:

$$y(n) = 2\delta(n) - 2\delta(n-2) + \delta(n-1) - \delta(n-3) + 0.5\delta(n-2) \\ - 0.5\delta(n-4) + \cancel{0.1}\delta(n-3) - 0.1\delta(n-5)$$

$$y(n) = 2\delta(n) + \delta(n-1) - 1.5\delta(n-2) - 0.9\delta(n-3) \\ - 0.5\delta(n-4) - 0.1\delta(n-5)$$

