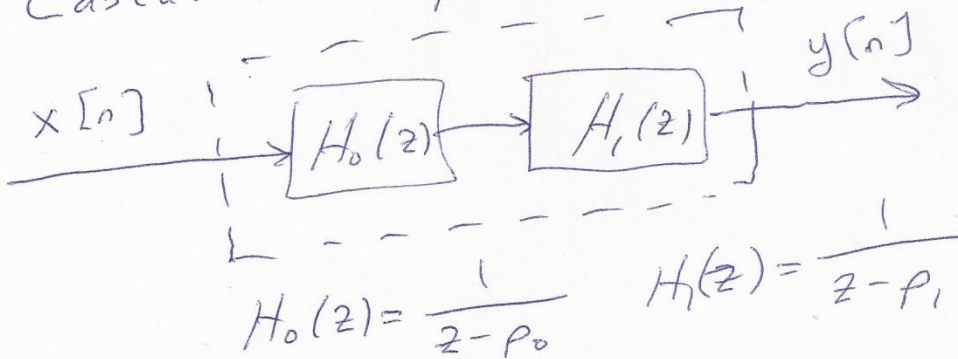


Transfer Function

$$H(z) = \frac{z^{-2}}{(1-p_0 z^{-1})(1-p_1 z^{-1})} = \frac{1}{(z-p_0)(z-p_1)}$$

Cascaded Implementation



$$H(z) = H_0(z)H_1(z)$$

Parallel Implementation

- Use partial fractions decomposition

$$H(z) = \underbrace{\frac{A}{z-p_0}}_{G_0(z)} + \underbrace{\frac{B}{z-p_1}}_{G_1(z)}$$

$$A = \frac{1}{p_0 - p_1}$$

$$B = \frac{1}{p_1 - p_0}$$

