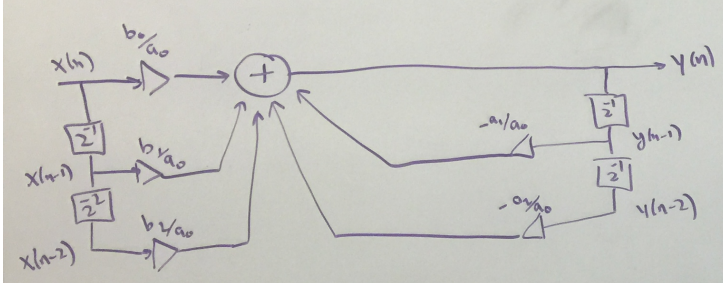
(4) Block Diagram

$$y(n) = -\frac{a_1}{a_0}y(n-1) + \frac{-a_2}{a_0}y(n-2) + \frac{b_0}{a_0}x(n) + \frac{b_1}{a_0}x(n-1) + \frac{b_2}{a_0}x(n-2)$$

$$H(z) = \frac{1}{1+a_1 z^{-1}}$$

$h(n) = a^n u(n)$ but a is complex



(5) Stability

Are poles inside the unit circle?

To find poles, find zeroes of the denominator of $H(z)$.