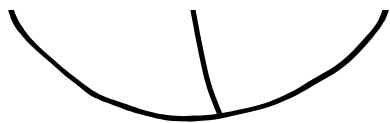
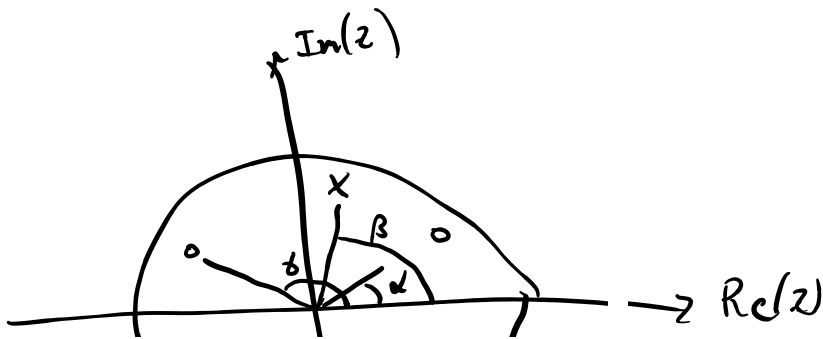
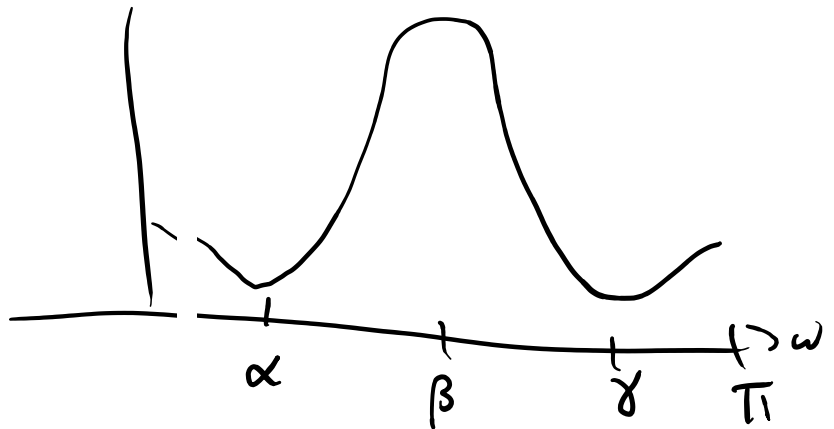


Desired  $|H(\omega)|$



$$H(z) = \frac{z - e^{j\beta}}{(z - e^{j\alpha})(z - e^{j\gamma})}$$

Inverse z-transform:  
 $h[n] = Z^{-1}(H(z))$

$$\frac{Y(z)}{X(z)} = \frac{(1 - e^{j\beta} z^{-1}) z^{-1}}{(1 - e^{j\alpha} z^{-1})(1 - e^{j\gamma} z^{-1})}$$

$$Y(z)(1 - e^{j\alpha} z^{-1})(1 - e^{j\gamma} z^{-1}) = X(z) z^{-1} (1 - e^{j\beta} z^{-1})$$

$$Y(z) (1 - (e^{j\alpha} + e^{j\gamma}) z^{-1} + e^{j(\alpha + \gamma)} z^{-2}) = X(z) z^{-1} (1 - e^{j\beta} z^{-1})$$

$$= Y(z) (z^{-1})$$

$$y[n] - (e^{j\alpha} + e^{j\beta}) y[n-1] +$$

$$= x[n-1] - e$$

$$y[n] = x[n-1] - e^{j\beta} x[n-2] - e^{j\alpha}$$

$$- e^{j\beta} z^{-2}$$

$$e^{j(\alpha+\beta)} y[n-2]$$

$$e^{j\beta} x[n-2]$$



$$+ (e^{j\alpha} + e^{j\beta}) y[n-1]$$

$$e^{j(\alpha+\beta)} y[n-2]$$