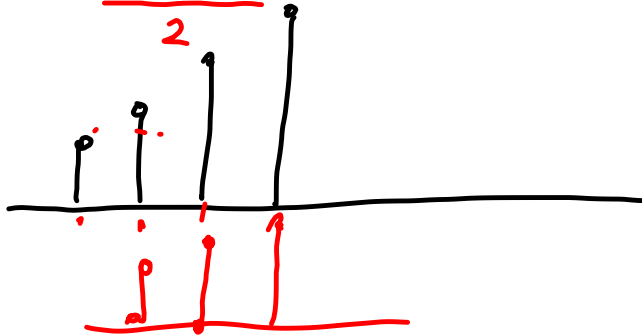
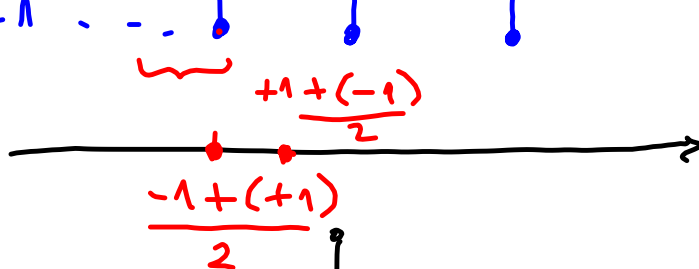
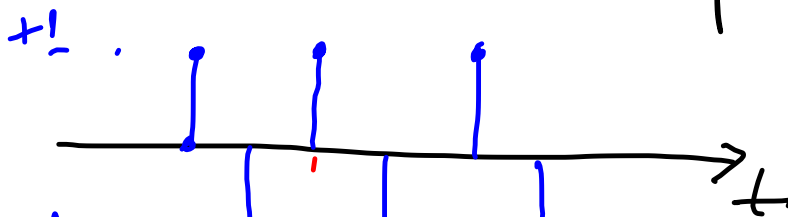
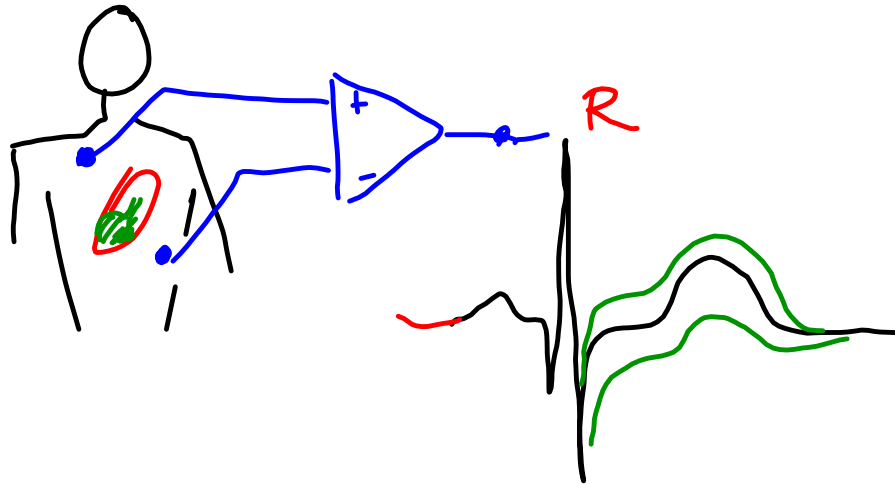


CPE381 #21

w 4/8 Hw4
 w 4/15 Final project
 M 4/20 Hw5
 M 4/27 Final



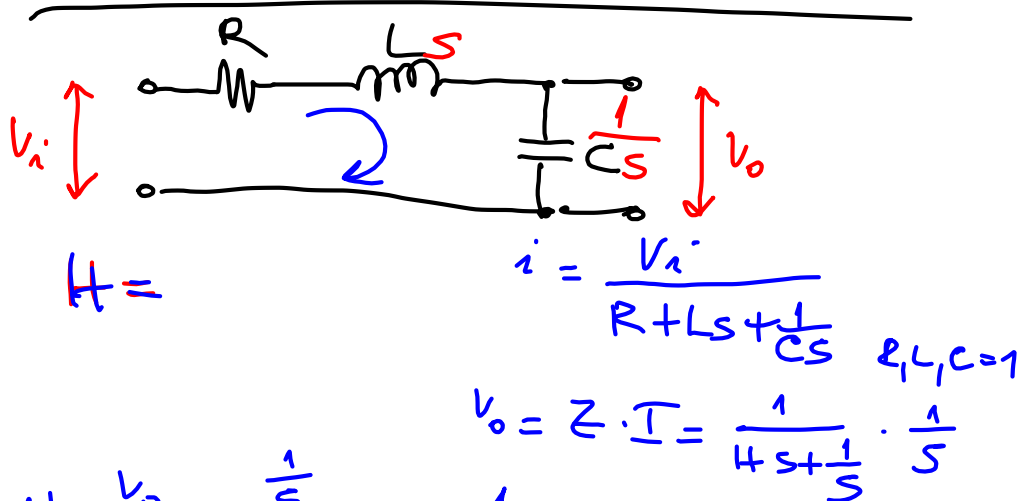
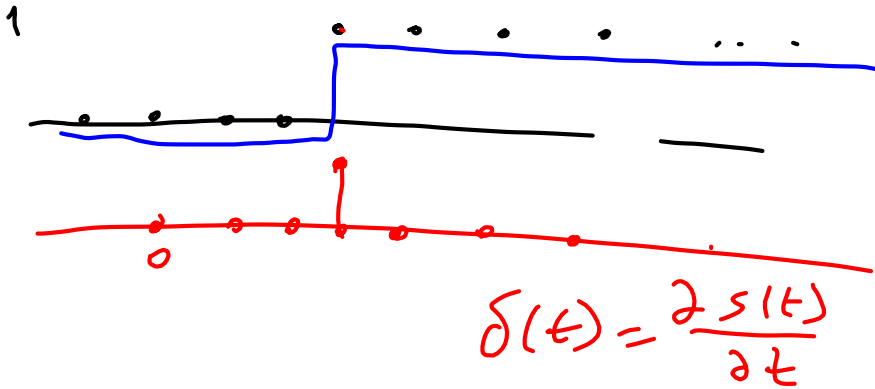
$$\frac{x(t) + x(t-1)}{2}$$

$$\frac{1}{2} \cdot x(t) + \frac{1}{2} x(t-1)$$

Ave 3

$$\frac{x(t) + x(t-1) + x(t-2)}{3}$$

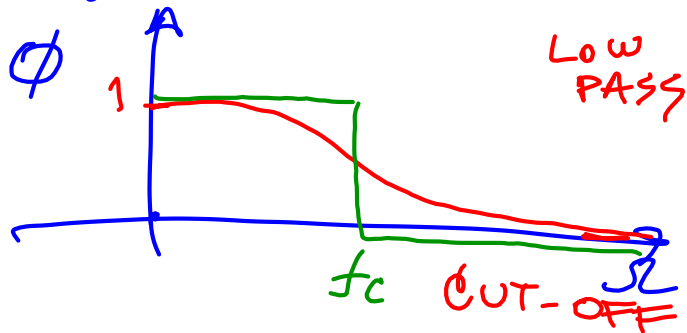
$$\frac{1}{3} x(t) + \frac{1}{3} x(t-1) + \frac{1}{3} x(t-2)$$

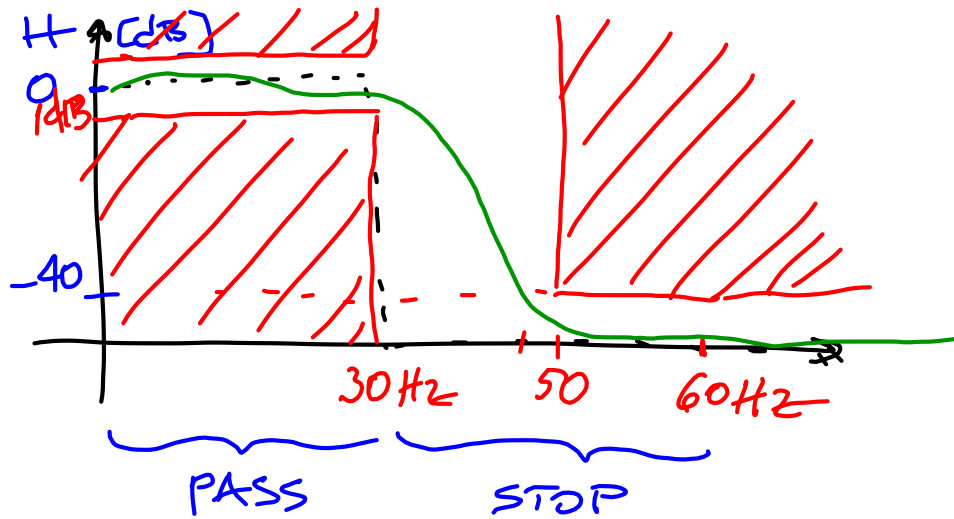


$$H = \frac{V_o}{V_i} = \frac{\frac{1}{s}}{1 + s + \frac{1}{s}} = \frac{1}{s^2 + s + 1}$$

$$\lim_{\omega \rightarrow 0} |H| = \frac{1}{(j\omega)^2 + (j\omega) + 1} = 1$$

$$\lim_{\omega \rightarrow \infty} |H| = 0$$



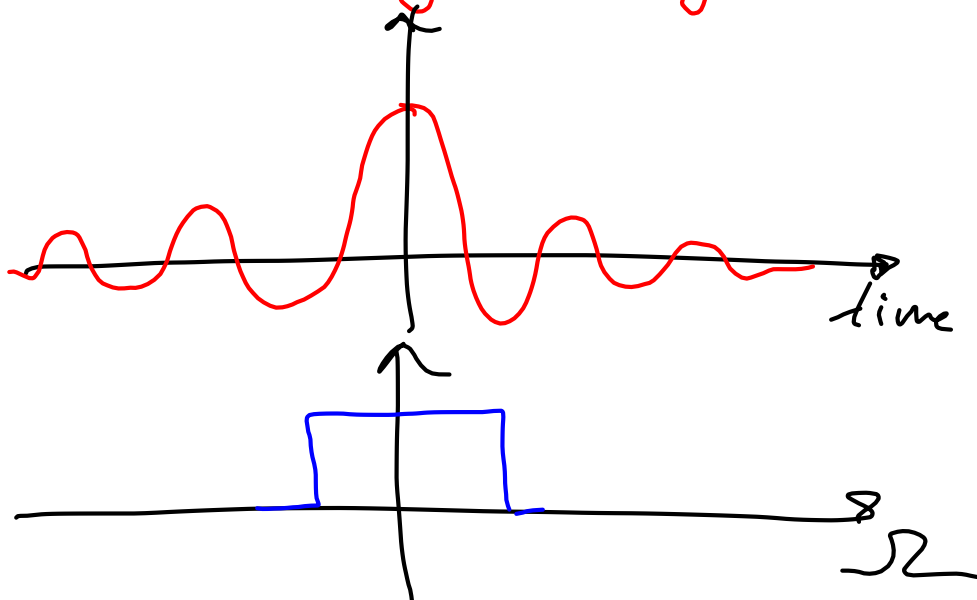


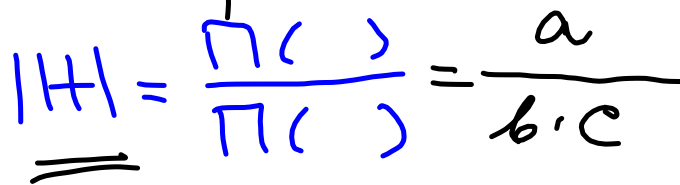
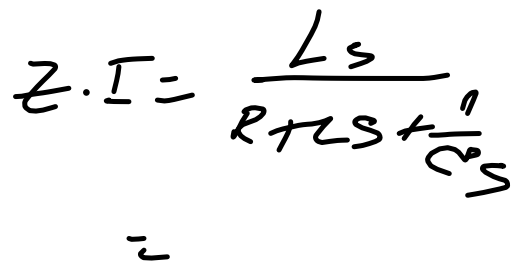
$$20 \cdot \log \frac{V_f}{V_{\text{origine}}}$$

$$100 \times \text{atten.} \Rightarrow \log \left(\frac{0.01 \cdot V_{\text{orig.}}}{V_{\text{orig.}}} \right) = -2$$

$$20 \cdot \log(0.01) = 20 \cdot (-2) = \underline{\underline{-40 \text{ dB}}}$$

FDATool in MATLAB
Filter Design & Analysis





ex. 5.17 page 371