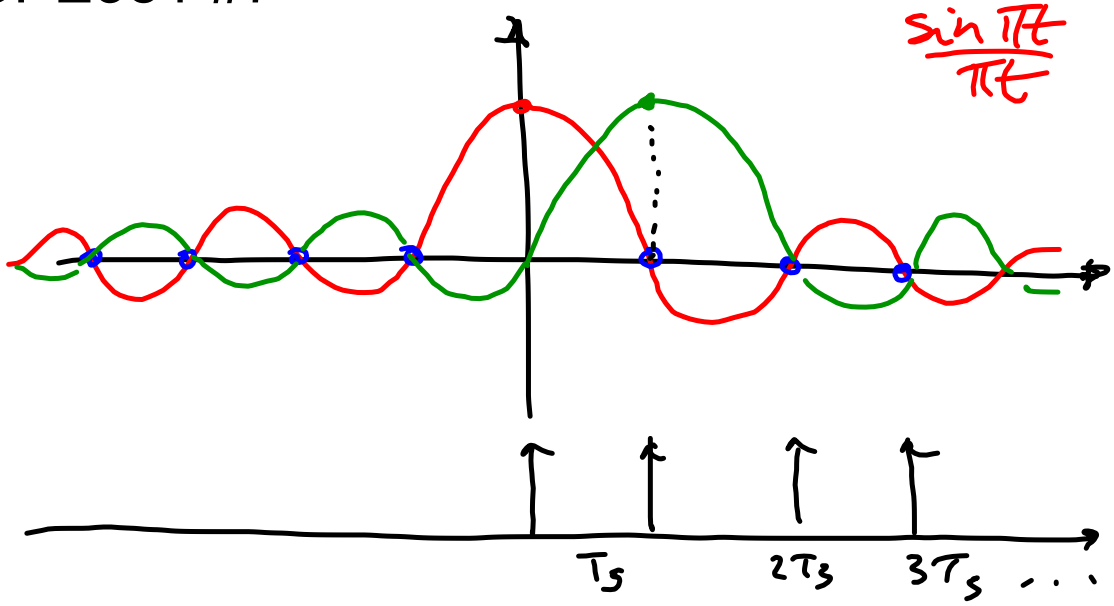
CPE381 #7



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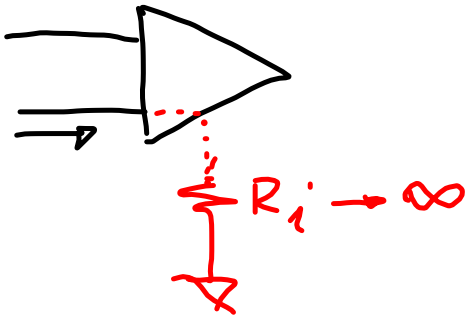
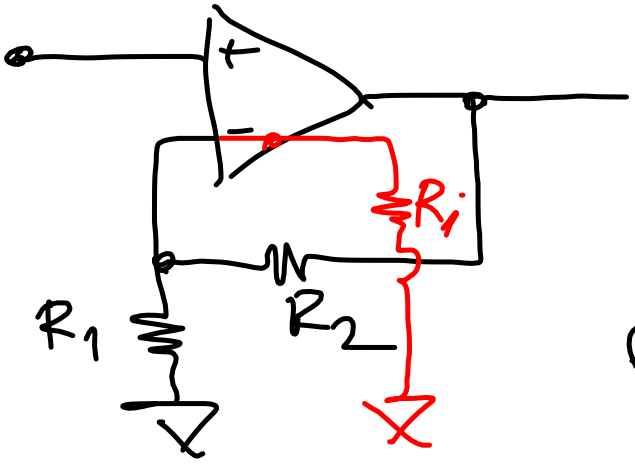
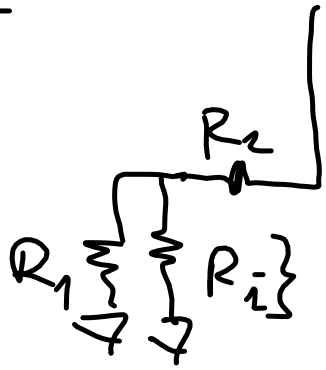




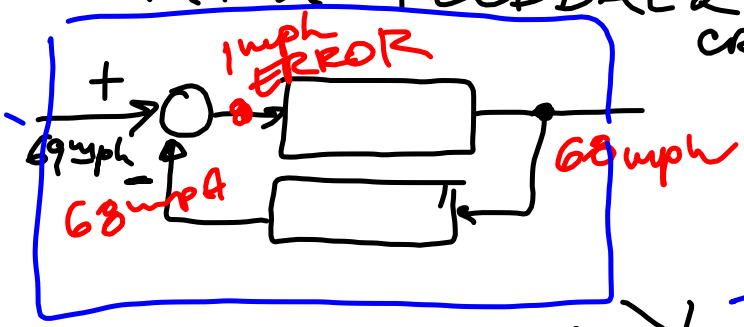


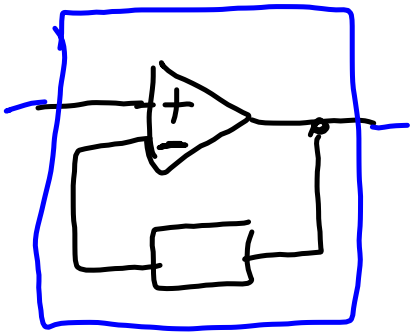
$\frac{R_1 R_i}{R_1 + R_i}$

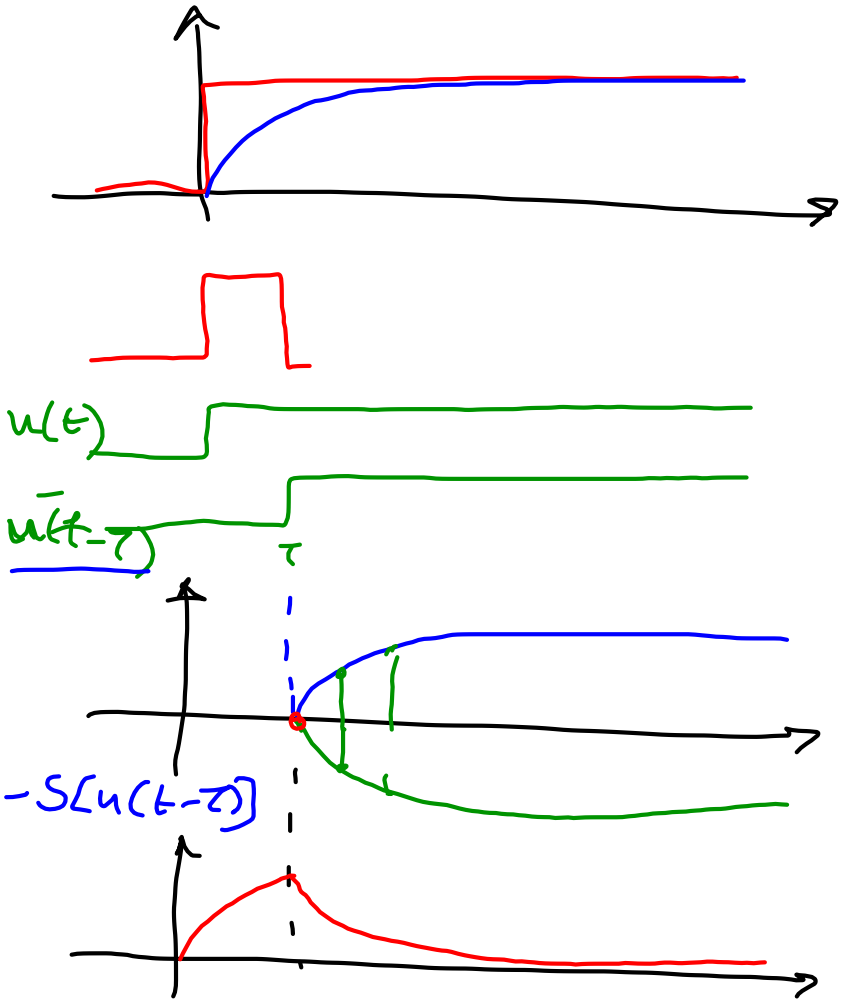
$R_i >> R_1 \quad R_i \to \infty$

NEGATIVE FEEDBACK

CRUISE CONTROL







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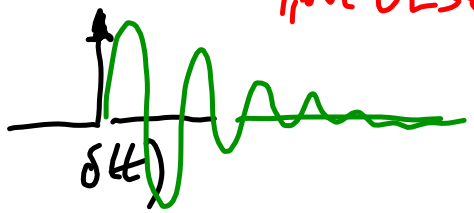
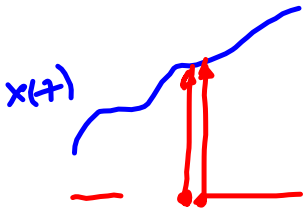
$x(t) \rightarrow y(t) = S[x(t)]$

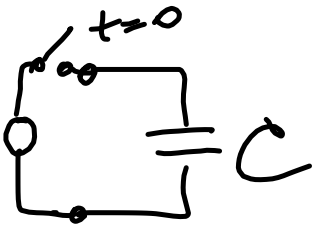
$\delta(t)$

$h(t) = S[\delta(t)]$

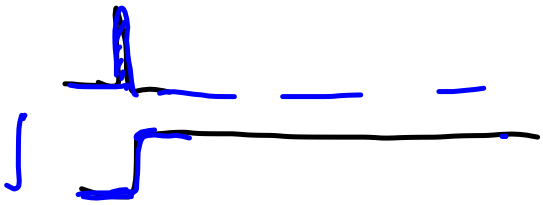
IMPULSE RESPONSE







$$x(t) = \begin{cases} \delta(t) \\ u(t) \end{cases}$$



$$h(t) = \frac{1}{C} u(t)$$

$$y(t) = \int_{-\infty}^{\infty} x(\tau) \cdot h(t-\tau)\, d\tau$$

IMPULSE RESPONSE

$$x(t) = u(t)$$

$$y(t) = \int u(\tau) \cdot h(t-\tau)\, d\tau$$

$$y(t) = \int u(\tau) \cdot \frac{1}{C} u(t-\tau) \cdot d\tau$$