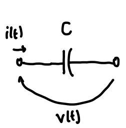
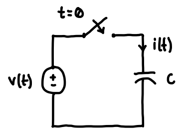
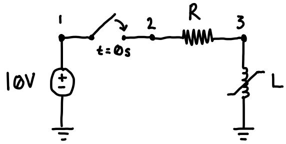


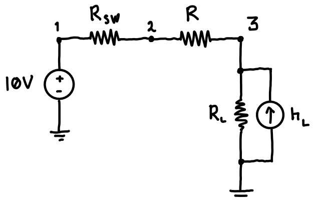


$$v(t) = \frac{2L_1}{\Delta t} i(t) + \left\{ -v(t-\Delta t) - \frac{2}{\Delta t}\lambda(t-\Delta t) + \frac{2}{\Delta t}\lambda_{k1} \right\}$$

eh(t)

$$\frac{2}{\Delta t}\left[\lambda_{k1} + L_1 i(t-\Delta t)\right]$$





$$g_{11} = \frac{1}{R_{sw}} \qquad g_{21} = -\frac{1}{R_{sw}} \qquad g_{31} = 0$$

$$g_{12} = -\frac{1}{R_{sw}} \qquad g_{22} = \frac{1}{R_{sw}} + \frac{1}{R} \qquad g_{32} = -\frac{1}{R}$$

$$g_{13} = 0 \qquad g_{23} = -\frac{1}{R} \qquad g_{33} = \frac{1}{R} + \frac{1}{R_L}$$

$$R_{L\,trap} = \frac{2L}{\Delta t} \qquad h_{L\,trap} = -\frac{\Delta t}{2L}v(t-\Delta t) - \frac{1}{L}\lambda(t-\Delta t) + \frac{1}{L}\lambda_K$$

$$R_{L\,back} = \frac{L}{\Delta t} \qquad h_{L\,back} = -\frac{1}{L}\lambda(t-\Delta t) + \frac{1}{L}\lambda_K$$

$$v(t) = \frac{d\lambda(t)}{dt}$$

$$\int_{t-\Delta t}^{t} v(t)\,dt = \int_{t-\Delta t}^{t} d\lambda(t)$$

TRAPEZOIDAL

$$\frac{v(t)+v(t-\Delta t)}{2}\Delta t = \lambda(t) - \lambda(t-\Delta t)$$

$$v(t) = \frac{2}{\Delta t}\left(\lambda_k + L i(t)\right) - v(t-\Delta t) - \frac{2}{\Delta t}\lambda(t-\Delta t)$$

$$v(t) = \frac{2L}{\Delta t} i(t) + \underbrace{\left[-v(t-\Delta t) - \frac{2}{\Delta t}\lambda(t-\Delta t) + \frac{2}{\Delta t}\lambda_K\right]}_{eh}$$

$$R = \frac{2L}{\Delta t}$$

$$h = -\frac{\Delta t}{2L}v(t-\Delta t) - \frac{1}{L}\lambda(t-\Delta t) + \frac{1}{L}\lambda_K$$

$$v(t)\Delta t = \lambda(t) - \lambda(t-\Delta t)$$

$$v(t) = \frac{1}{\Delta t}\left(\lambda_k + L i(t)\right) - \frac{1}{\Delta t}\lambda(t-\Delta t)$$

$$v(t) = \frac{L}{\Delta t} i(t) + \underbrace{\left[-\frac{1}{\Delta t}\lambda(t-\Delta t) + \frac{1}{\Delta t}\lambda_K\right]}_{eh}$$

BACKWARDS EULER

$$R = \frac{L}{\Delta t}$$

$$h = -\frac{1}{L}\lambda(t-\Delta t) + \frac{1}{L}\lambda_K$$