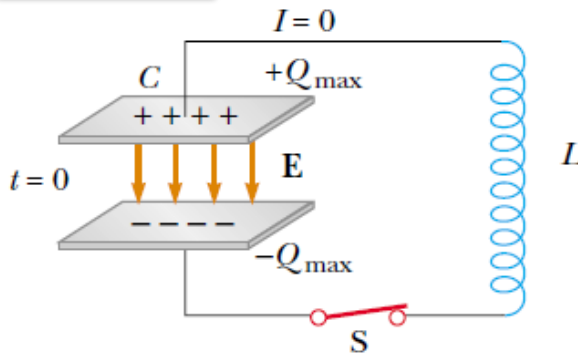
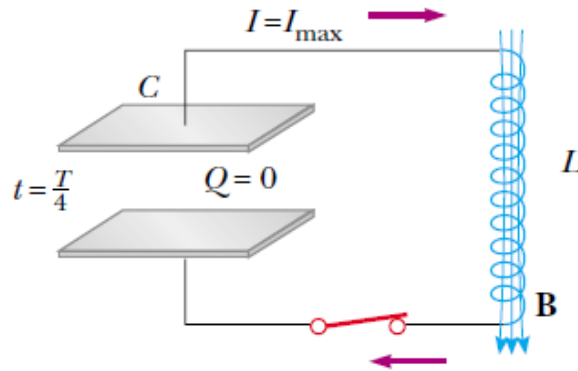


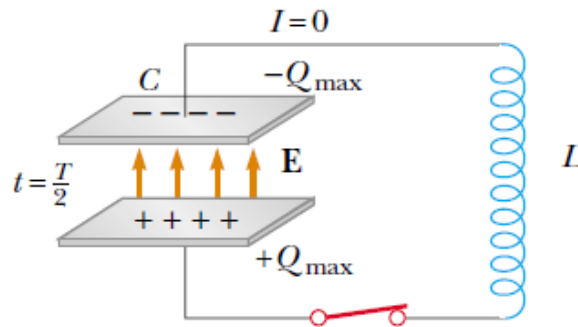
LC Krug:



(a)

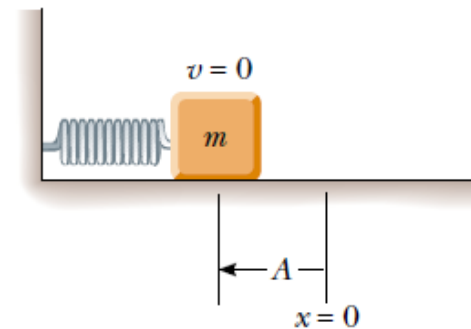
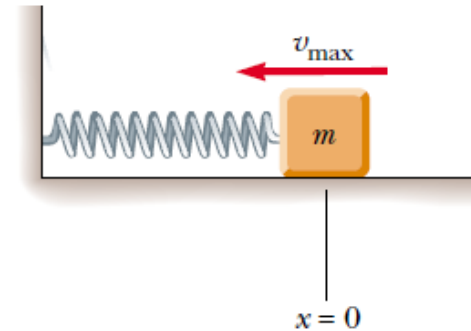
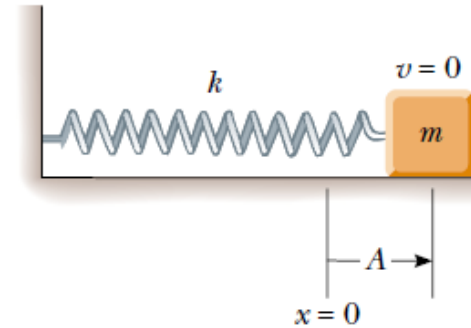


(b)



(c)

Tijelo na opruzi:



$$U = U_C + U_L = \frac{Q^2}{2C} + \frac{1}{2}LI^2$$

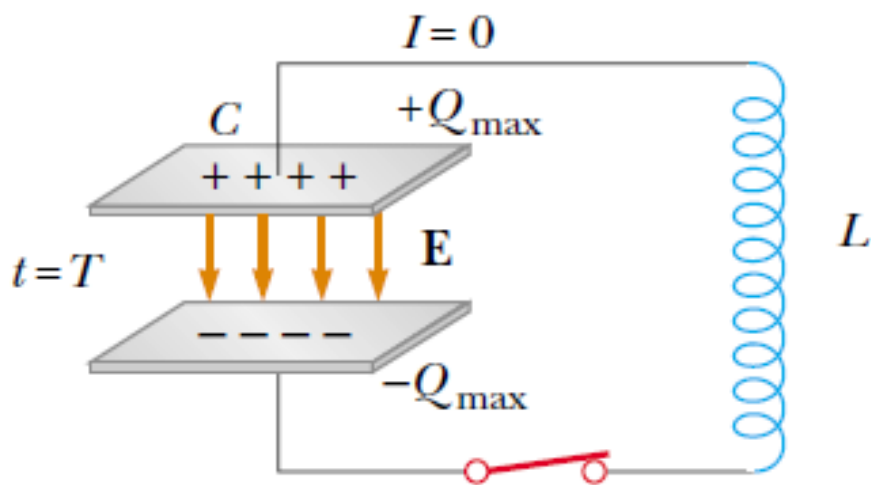
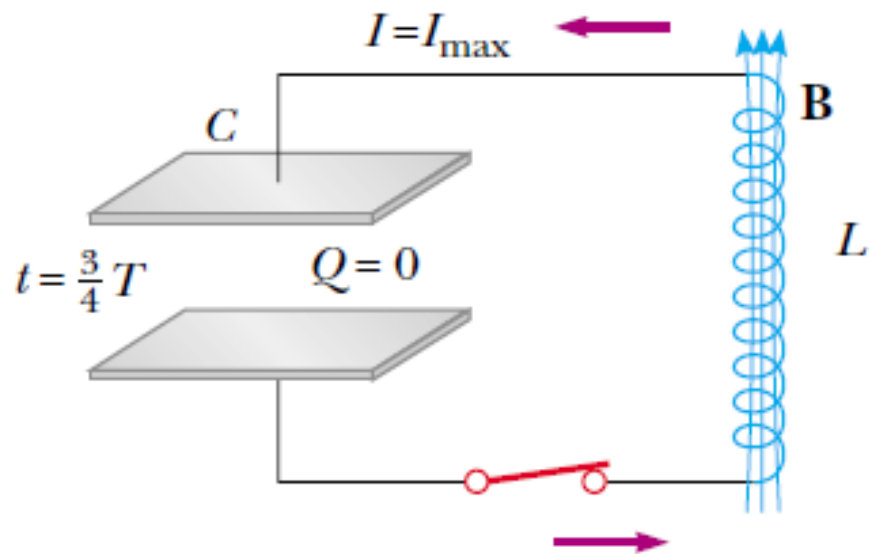
$$\frac{dU}{dt} = 0$$

$$\frac{d^2Q}{dt^2} = -\frac{1}{LC}Q$$

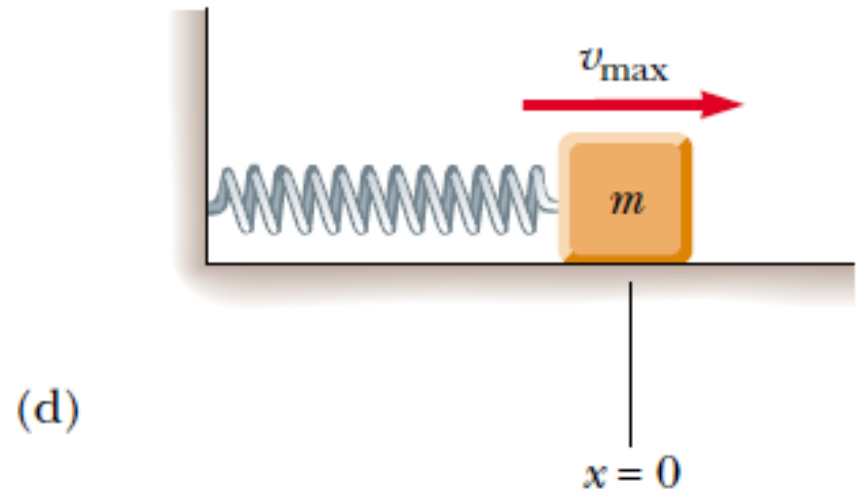
$$Q = Q_{\text{max}} \cos(\omega t + \phi)$$

$$\omega = \frac{1}{\sqrt{LC}}$$

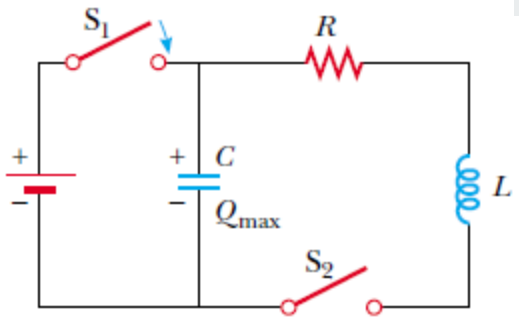
LC Krug:



Tijelo na opruzi:



RLC Krug:



$$Q = Q_{\max} e^{-Rt/2L} \cos \omega_d t$$

$$U_L = \frac{1}{2} LI^2$$

$$U_C = \frac{1}{2} \frac{Q^2}{C}$$

$$I^2 R$$

$$L \frac{d^2 Q}{dt^2} + R \frac{dQ}{dt} + \frac{Q}{C} = 0$$

$$\omega_d = \left[\frac{1}{LC} - \left(\frac{R}{2L} \right)^2 \right]^{1/2}$$

Prigušeni LHO:

$$K = \frac{1}{2} mv^2$$

$$U = \frac{1}{2} kx^2$$

$$bv^2$$

$$Q \leftrightarrow x$$

$$I \leftrightarrow v_x$$

$$\Delta V \leftrightarrow F_x$$

$$R \leftrightarrow b$$

$$C \leftrightarrow 1/k$$

$$L \leftrightarrow m$$

$$I = \frac{dQ}{dt}$$

$$v_x = \frac{dx}{dt}$$

$$\frac{dI}{dt} = \frac{d^2 Q}{dt^2}$$

$$a_x = \frac{dv_x}{dt} = \frac{d^2 x}{dt^2}$$

$$m \frac{d^2 x}{dt^2} + b \frac{dx}{dt} + kx = 0$$

