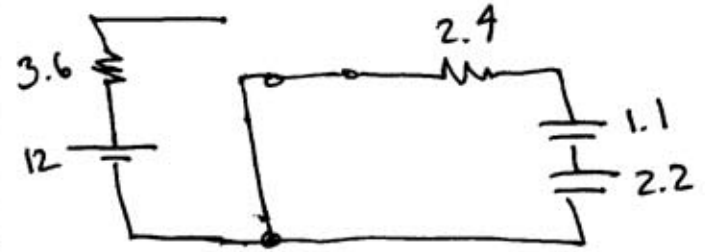
resistors KΩ
capacitors μF

2.



(A) $V = IR \qquad 12 = I(3.6 + 2.4)$ ← resistors in series

$I = 2\text{mA}$

(B) $Q = VC = (12)(.733) = 8.80\,\mu C$ ← 1.1 + 2.2 capacitors in series

(C) Capacitors in series same charge

$V = \frac{Q}{C} = \frac{8.80}{1.1} = 8 \text{ Volts}$

(D) $Q = Q_S(1 - e^{-t/RC})$

$\frac{Q}{Q_S} = .9 = 1 - e^{-t/(6)(.733)}$

$.1 = e^{-t/4.4}$

$\ln(.1) = -t/4.4$

$t = 10.13 \text{ ms}$

(E) The time constant for discharging is smaller since it has only one resistor (instead of two in series) (charging to 90% + losing 70% is the equiv so diff is in time constants)