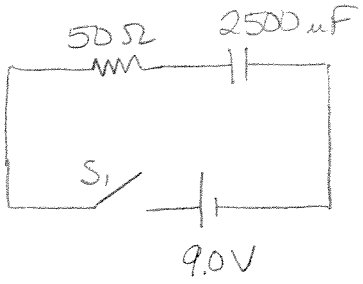
P # F

Ch 18 - Worksheet

a) $C = 2500\,\mu F$
$R = 50\,\Omega$

$V = 9.0\,V$




b) $V = I \cdot R$ (max I occurs @ t = 0)

$(9\,V) = I \cdot (50\,\Omega)$

$I = .18\,A$

c) C has not had time to charge: Q = zero

d) Charge is no longer flowing: I = zero

e) $C = \frac{Q}{V}$ (max Q occurs @ steady-state conditions)

$(2500 \times 10^{-6}\,F) = \frac{Q}{(9\,V)}$

$Q = .0225\,C$