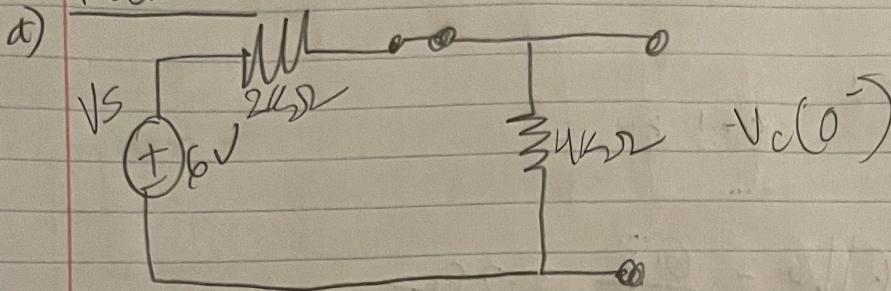


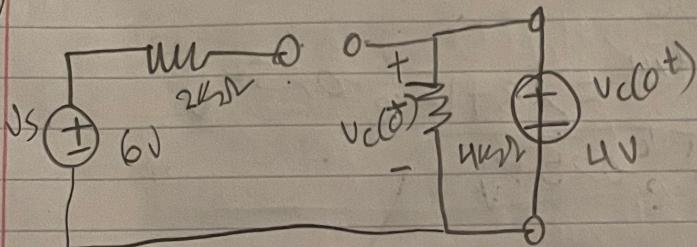
# HW #8

Problem 1:



$$V_c(0) = V_s \cdot \frac{4}{4+2} \Rightarrow 6 \cdot \frac{4}{6} = 4 \text{ Volts}$$

b)

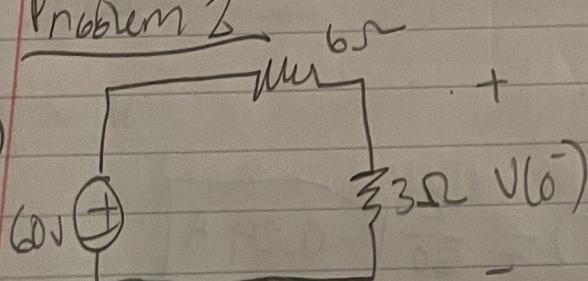


$$V_o(\infty) = V_c(\infty) \\ V_o(\infty) = 0V \Rightarrow C = RC \Rightarrow (4, 10^3, 3 \cdot 10^{-3}) = 12 \text{ sec}$$

$$V_o(t) = V_o(\infty) + (V_o(0^+) - V(0)) e^{-t/C} \\ = 0 + (4 - 0) e^{-t/12} \Rightarrow 4e^{-t/12} \text{ Volts}$$

Problem 2

a)



$$V(0) = 20V$$