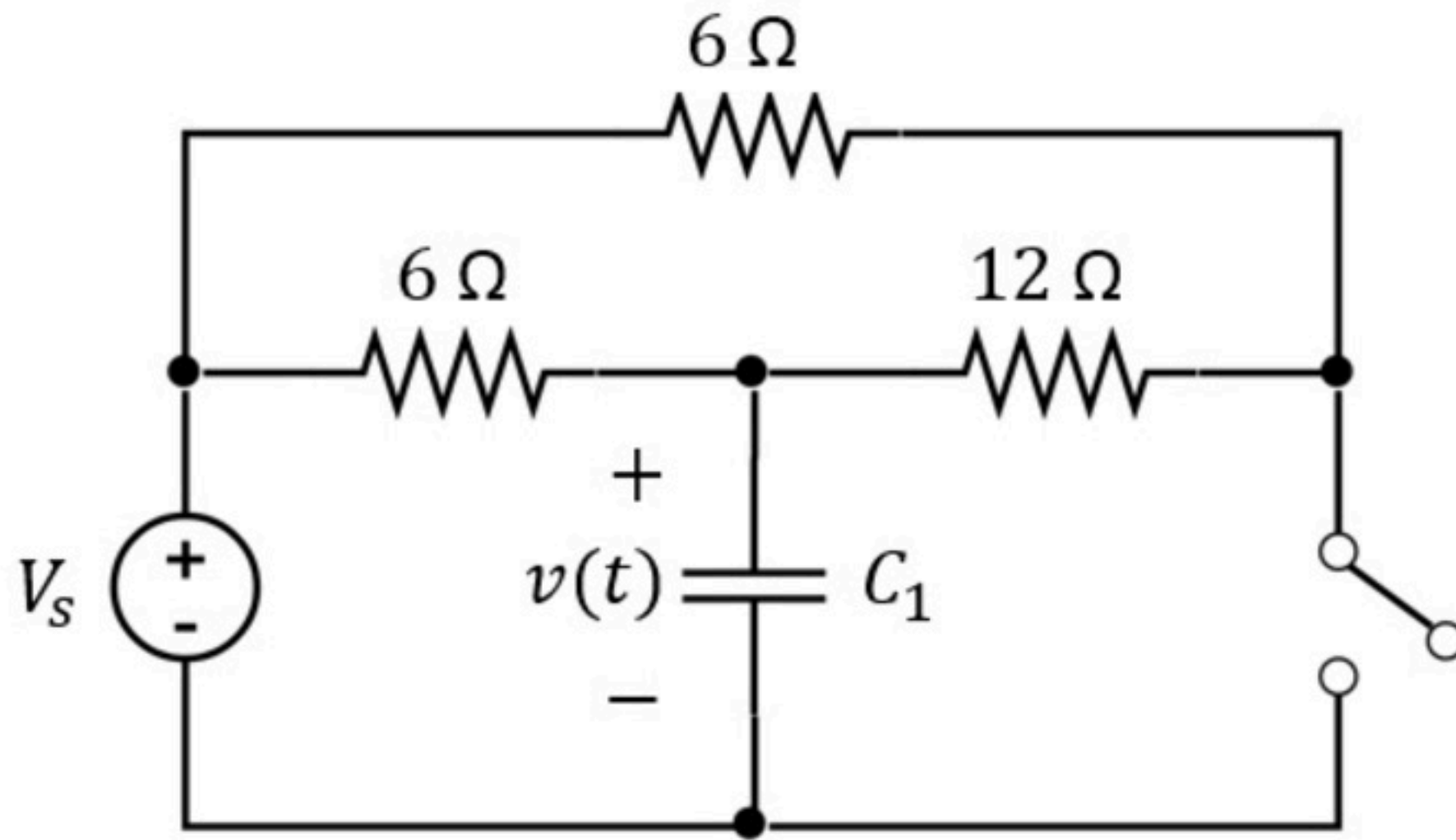


First order circuits 002

Unlimited Attempts.

- Find the time constant τ_1 and the steady state capacitor voltage $v_1 = v(\infty)$ when the switch is open.
- Find the time constant τ_2 and the steady state capacitor voltage $v_2 = v(\infty)$ when the switch is closed.



Given Variables:

V_s : 30 V

C_1 : 8 nF

Calculate the following:

τ_1 (ns) :

36



v_1 (V) :

30



τ_2 (ns) :

32



v_2 (V) :

20



Hint: The circuit is different in the two cases