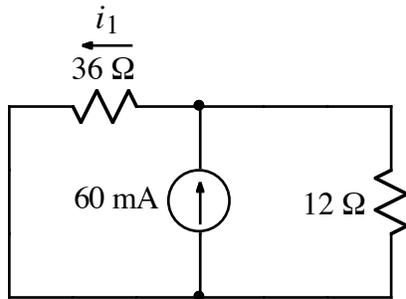
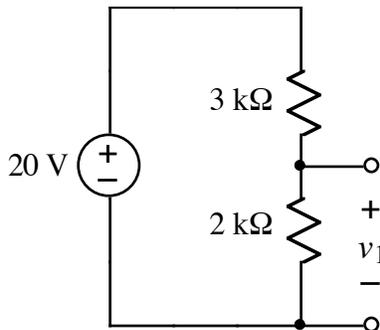


Ex:



- a) Use the current-divider formula to calculate  $i_1$ .



- b) Use the voltage-divider formula to calculate  $v_1$ .

**SOL'N:** a) The two resistors are in parallel across the current source. Current flows up through the current source and back down through the two resistors. The current-divider formula gives the value of  $i_1$ :

$$i_1 = 60 \text{ mA} \cdot \frac{12 \Omega}{12 \Omega + 36 \Omega} = 15 \text{ mA}$$

- b) This is a standard voltage divider configuration.

$$v_1 = 20 \text{ V} \cdot \frac{2 \text{ k}\Omega}{2 \text{ k}\Omega + 3 \text{ k}\Omega} = 8 \text{ V}$$