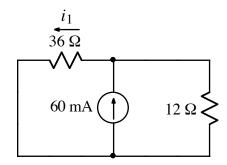
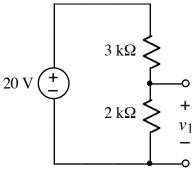


Ex:



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.

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