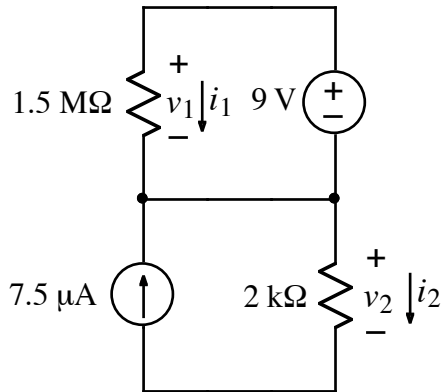


Ex:

Use Kirchhoff's laws to find v_1 and i_2 .

SOL'N: From the upper voltage loop we find that $v_1 = 9$ V.

$$v_1 - 9 \text{ V} = 0 \Rightarrow v_1 = 9 \text{ V}$$

If we consider a node between the $7.5 \mu\text{A}$ source and the $2 \text{ k}\Omega$ resistor, we can show that the same current flows in the current source and the $2 \text{ k}\Omega$ resistor:

$$7.5 \mu\text{A} - i_2 = 0 \Rightarrow i_2 = 7.5 \mu\text{A}$$

Note that we can find these quantities using only Kirchhoff's laws. If we want to find i_1 and v_2 , we can use Ohm's law.