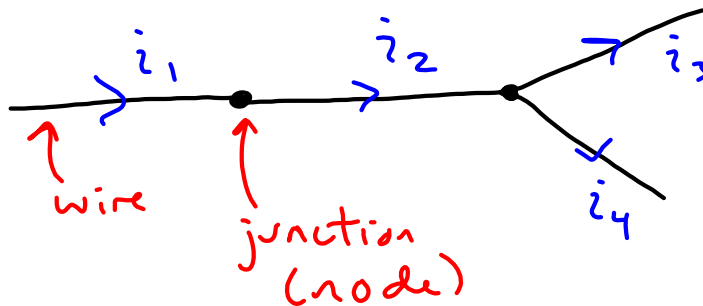


ELECTRIC FIELD AND CIRCUITS

- Equilibrium vs Steady-State
 - Equilibrium means no current is flowing: $\bar{v} = \emptyset$
 \hookrightarrow drift velocity
 - Steady-State means that charges are moving ($\bar{v} \neq \emptyset$)

- Current Node Rule



$$i_1 = i_2 = i_3 + i_4$$

- Figure 18.5

$$I_1 + I_4 = I_2 + I_3$$

$$I_2 = I_1 + I_4 - I_3$$

$$= 3 \text{ A}$$