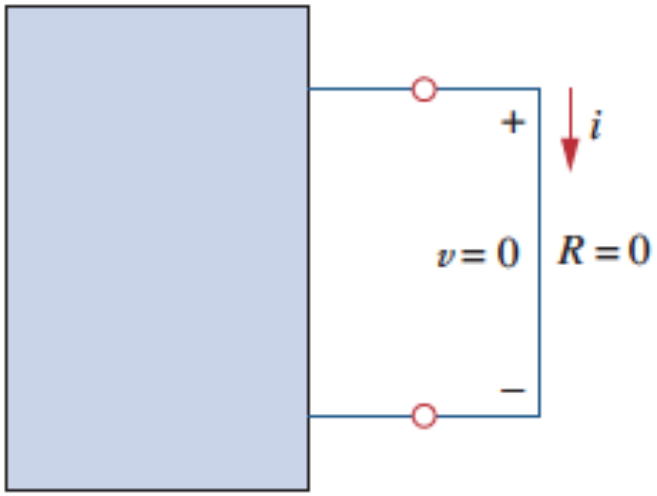
Basics – 7

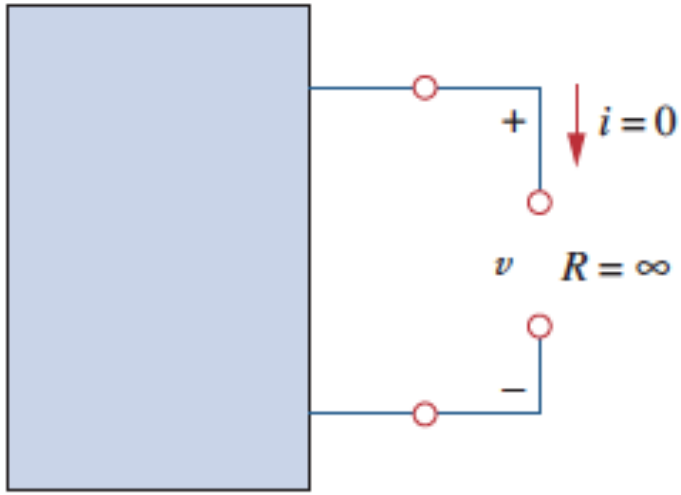
odds and ends

Special Cases

- Short circuit (R = 0)

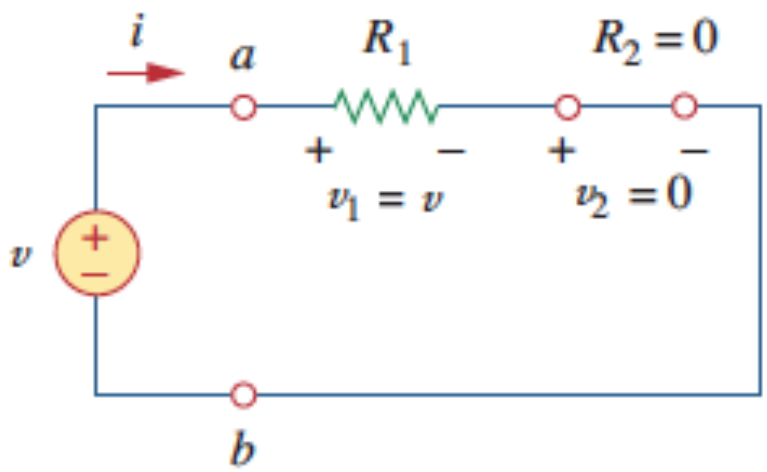


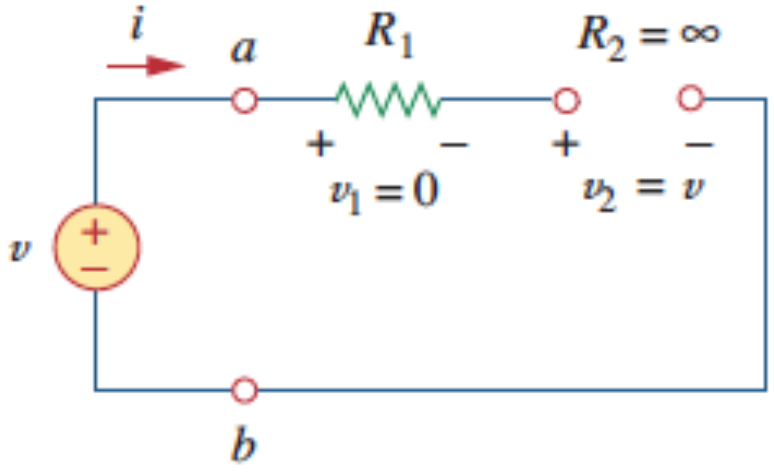
- Open circuit (R = infinity)



- Voltage division

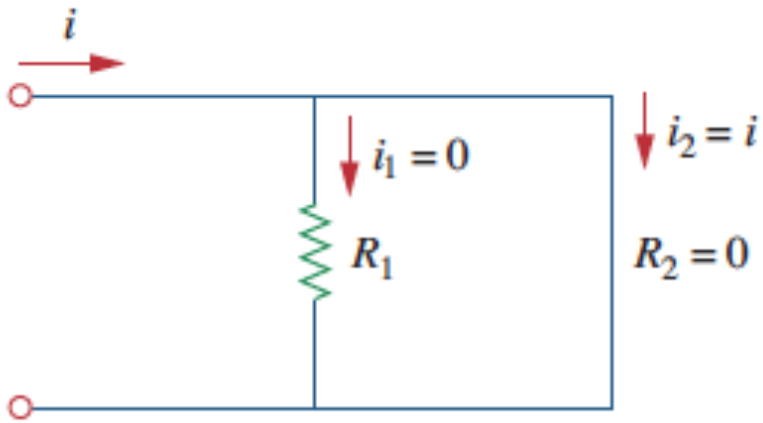
$$v_1 = \frac{R_1}{R_1 + R_2} v \qquad v_2 = \frac{R_2}{R_1 + R_2} v$$

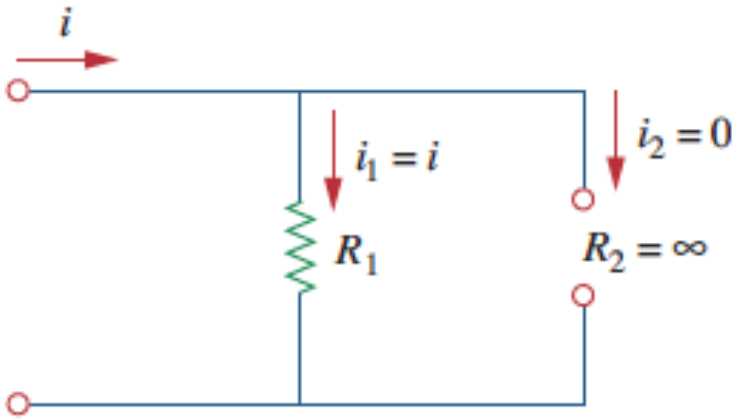




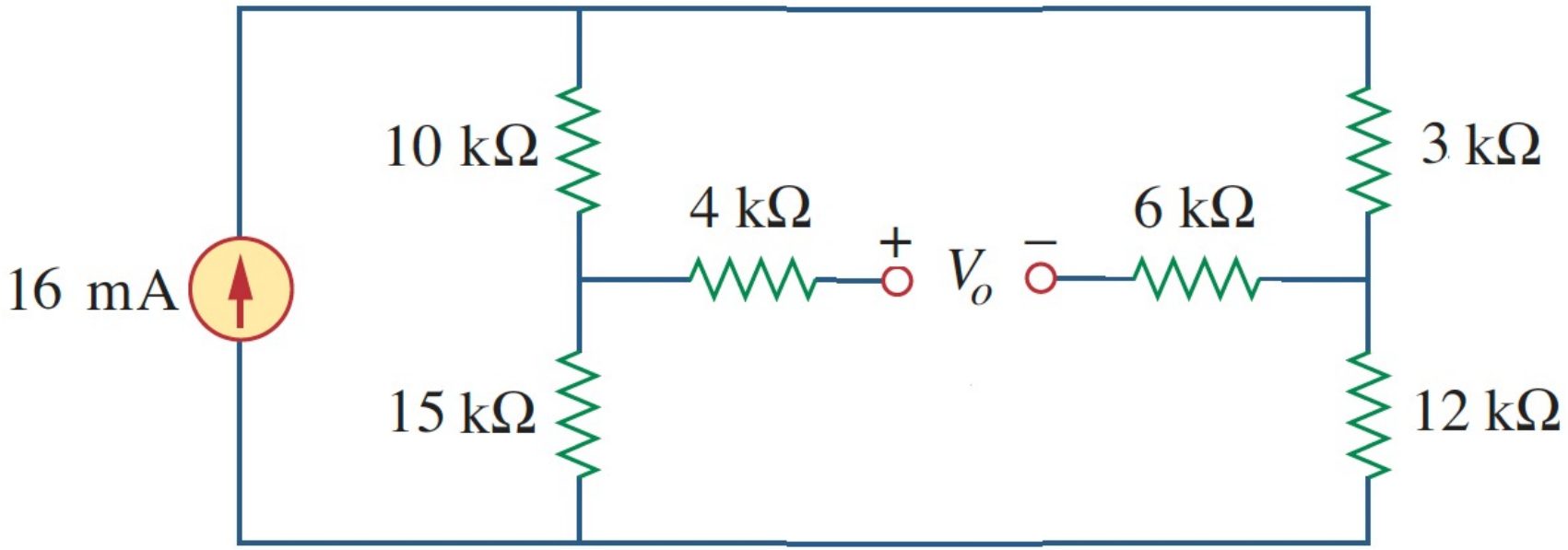
- Current division

$$i_1 = \frac{R_2}{R_1 + R_2} i \qquad i_2 = \frac{R_1}{R_1 + R_2} i$$

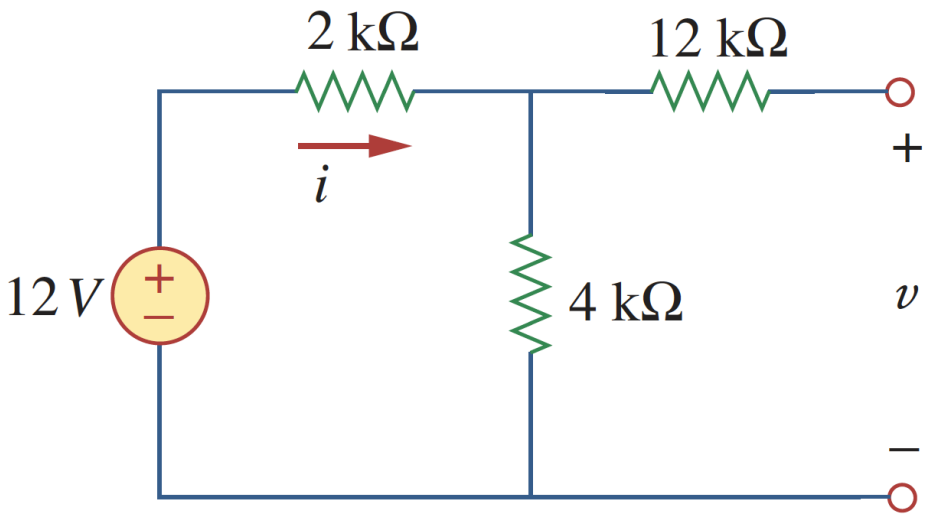




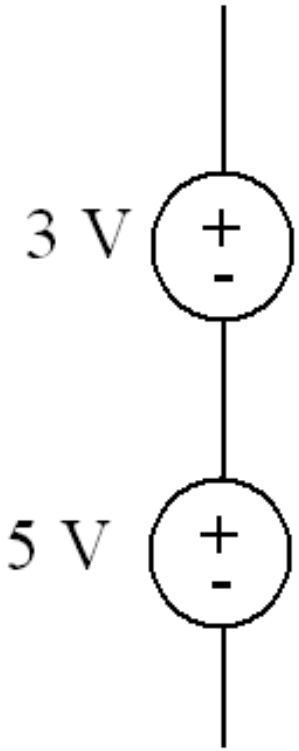
Example:

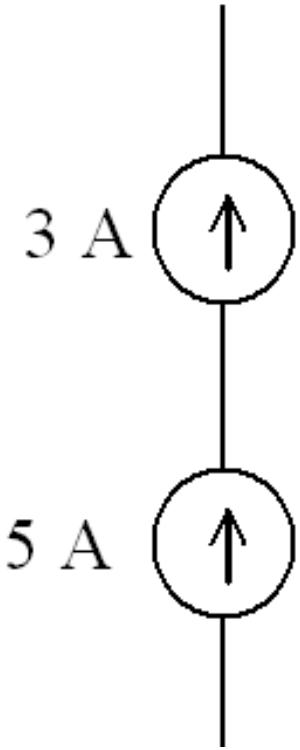


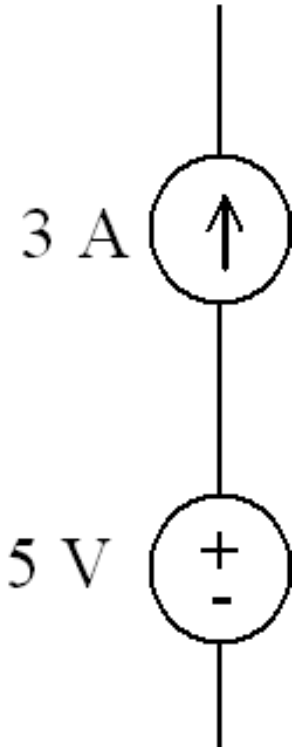
Example: find i and v



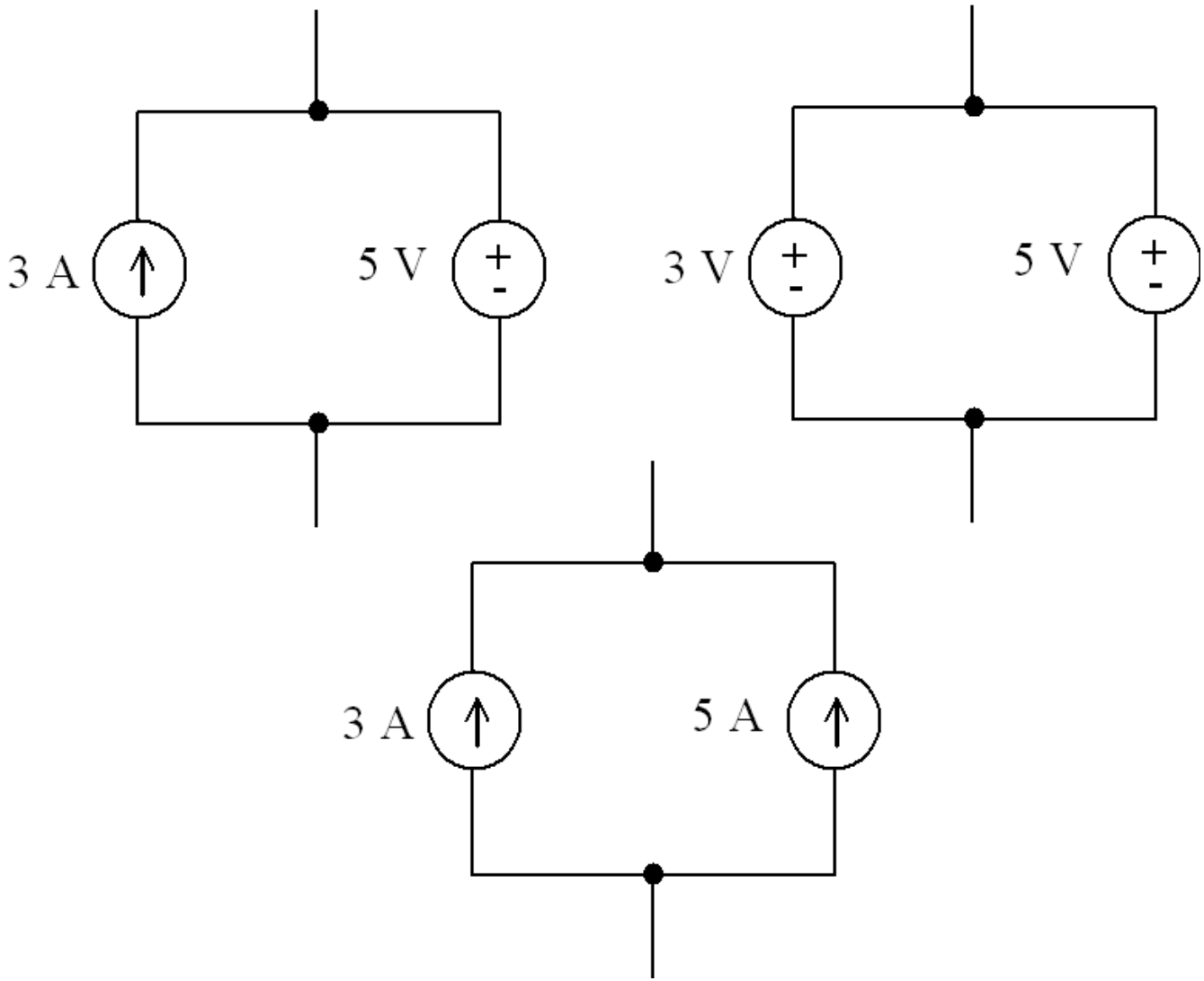
Do We Allow Series Sources?



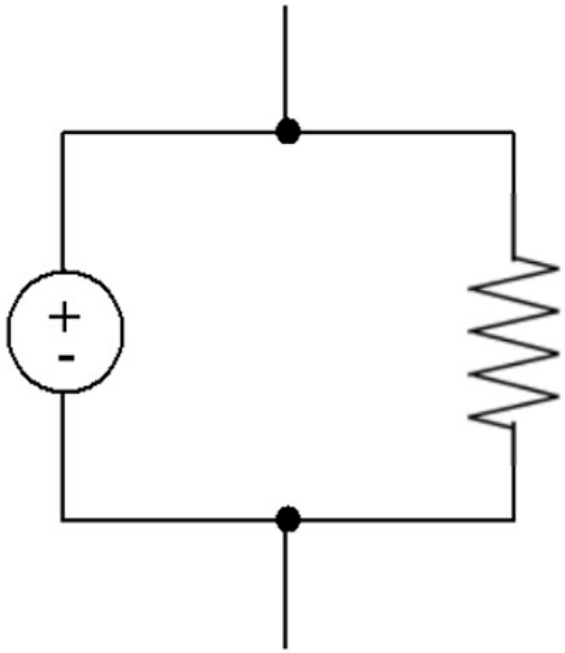


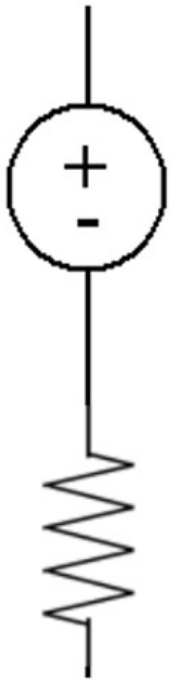


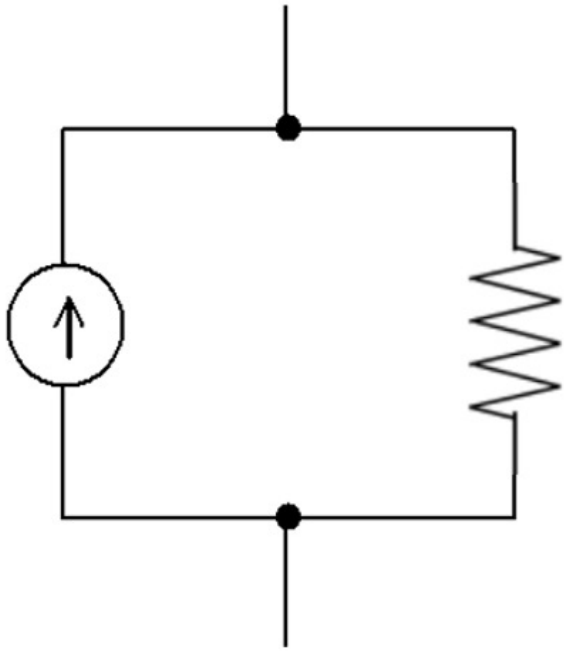
How about parallel sources?

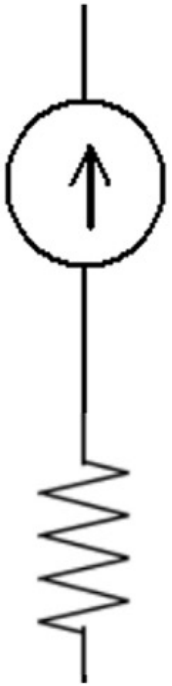


How about resistors and sources?

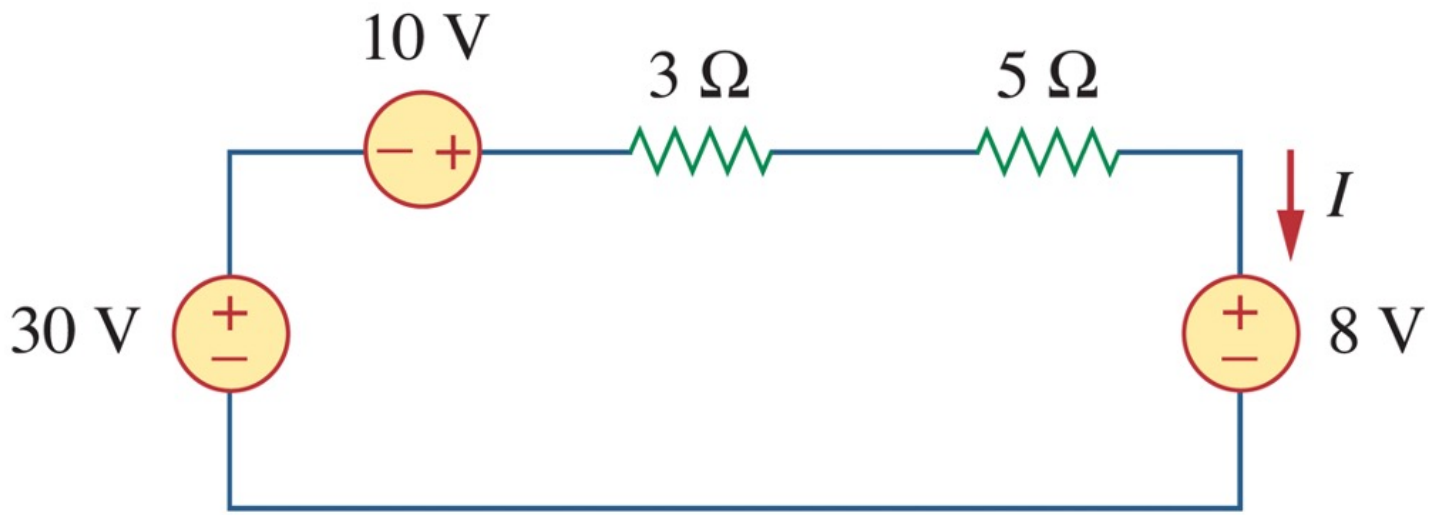




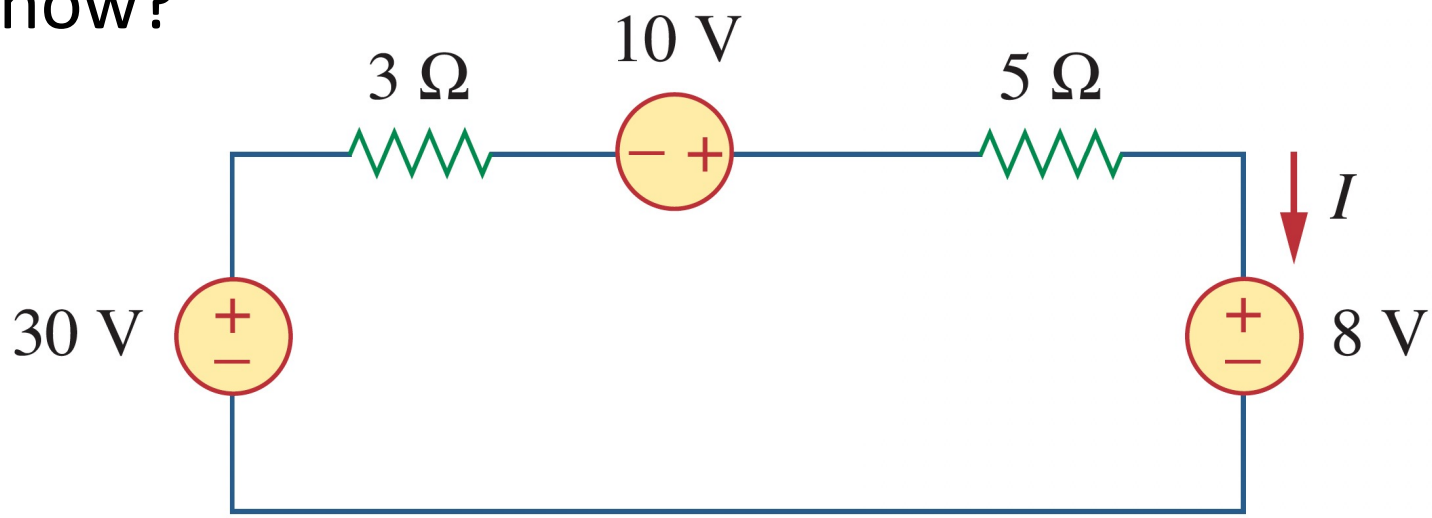


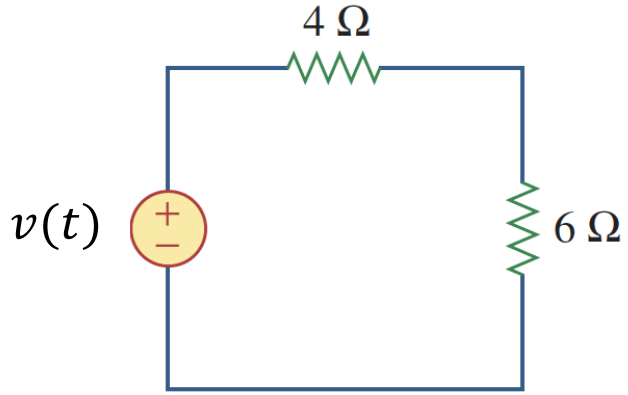


Example: find I



And now?



Time Varying Example

- What happens now?