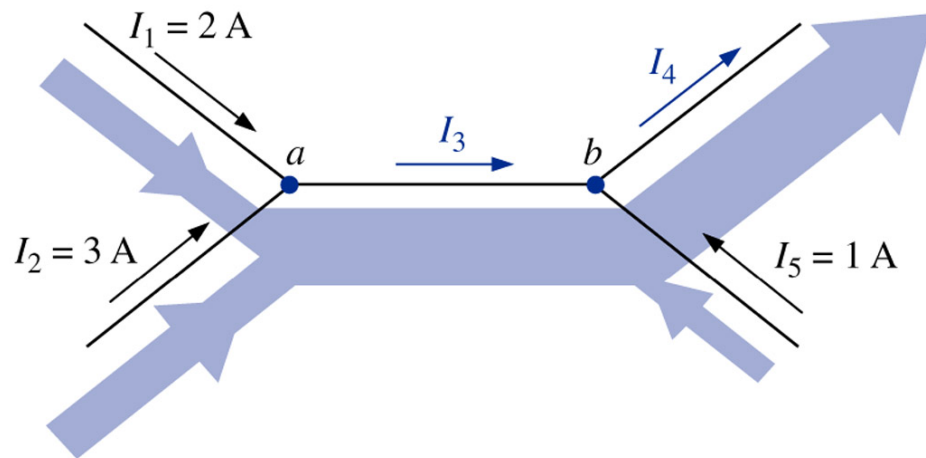


Breakout #1

- Find

- I_3 and I_4



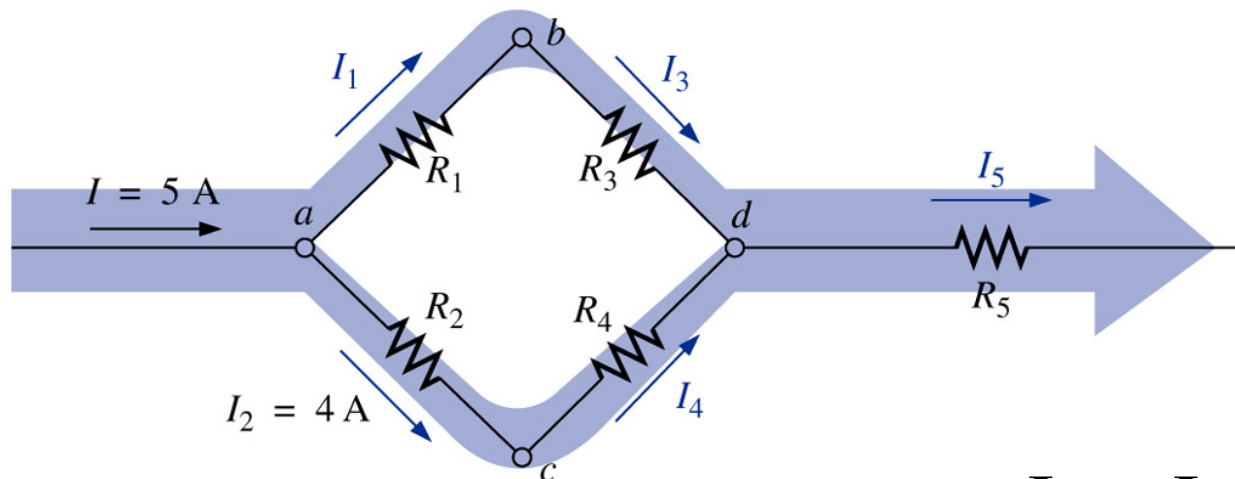
$$\begin{aligned} I_3 &= I_1 + I_2 \\ &= 5\text{ A} \end{aligned}$$

$$\begin{aligned} I_4 &= I_3 + I_5 \\ &= 6\text{ A} \end{aligned}$$

Breakout #2

■ Find

□ I_1, I_3, I_4, I_5



$$\text{KCL: } I = I_1 + I_2$$

$$\therefore I_1 = I - I_2 = 1 \text{ A}$$

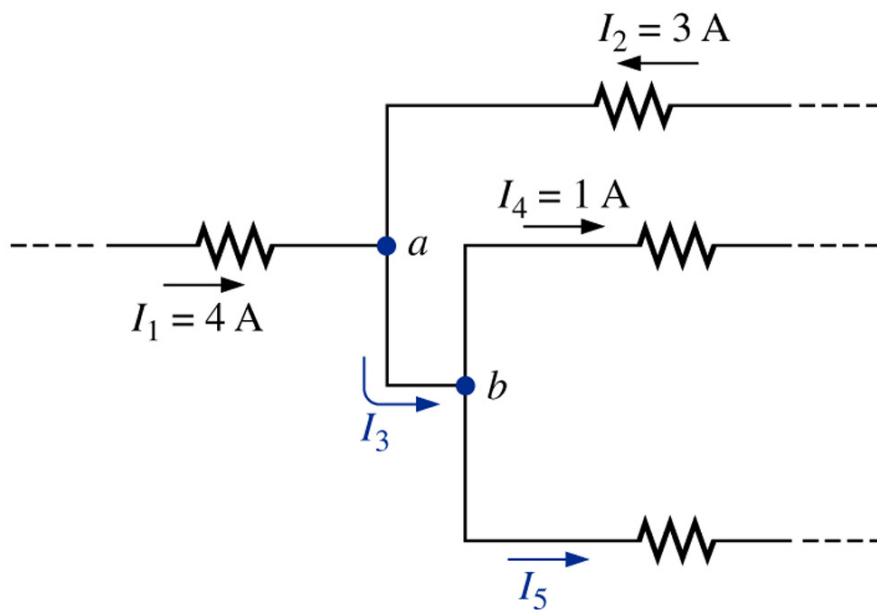
$$I_3 = I_1 = 1 \text{ A}$$

$$I_4 = I_2 = 4 \text{ A}$$

$$I_5 = I_3 + I_4 = 5 \text{ A}$$

Breakout #3

- Find
 - I_3 and I_5



$$\text{KCL @ } b : I_3 = I_4 + I_5$$

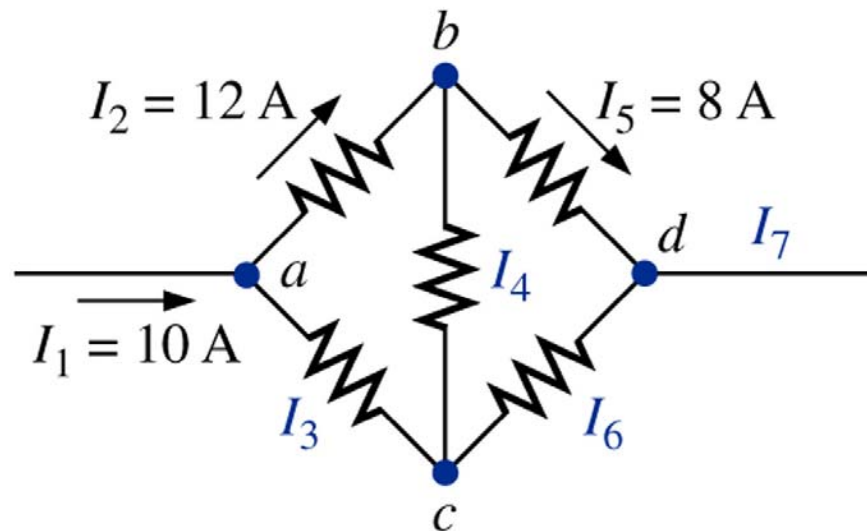
$$\therefore I_5 = I_3 - I_4 = 6 \text{ A}$$

$$I_3 = I_1 + I_2 = 7 \text{ A}$$

Breakout #4

Find

I_3, I_4, I_6, I_7 (Direction and magnitude)



$$\begin{aligned}
 I_{ca} + I_1 &= I_2 \\
 \therefore I_{ca} &= I_{3_up} = I_2 - I_1 \\
 &= 2 \text{ A}
 \end{aligned}$$

$$\begin{aligned}
 I_{bc} &= I_2 - I_5 \\
 \therefore I_{bc} &= I_{4_down} = 4 \text{ A}
 \end{aligned}$$

$$\begin{aligned}
 I_{cd} &= I_{ac} + I_{bc} = I_{6_up} \\
 &= -2 \text{ A} + 4 \text{ A} = 2 \text{ A}
 \end{aligned}$$

$$\begin{aligned}
 I_{7_right} &= I_5 + I_{6_up} \\
 &= 10 \text{ A}
 \end{aligned}$$