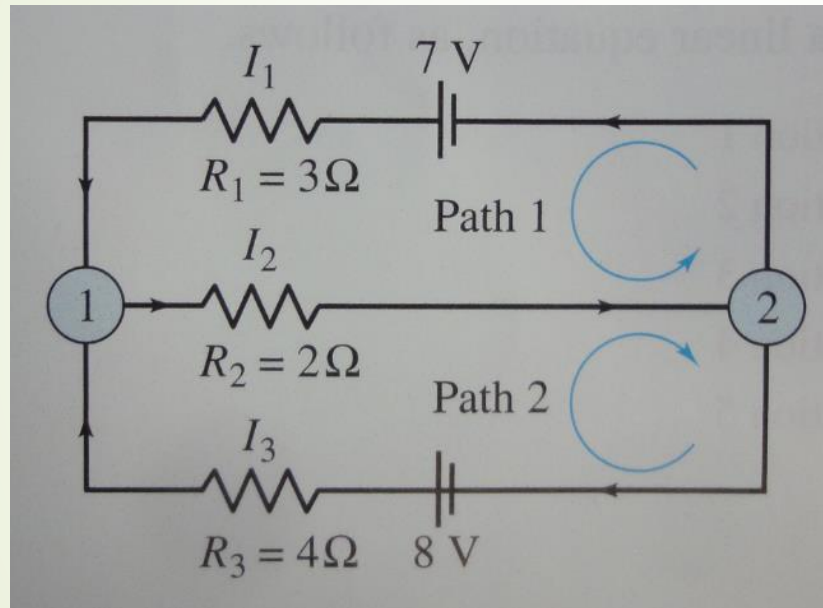


# Electrical Networks



Determine the unknown currents in the network (set up only).

Larson, 2013



# Operations on Matrices

Section 2.1

## Example

Let  $A = \begin{bmatrix} -1 & 2 \\ 0 & 1 \end{bmatrix}$ ,  $B = \begin{bmatrix} 1 & 3 \\ -1 & 2 \end{bmatrix}$ , and  $C = \begin{bmatrix} 0 & 1 \\ -1 & 3 \\ 2 & 4 \end{bmatrix}$ .

Compute the following, if possible:

$A + B$ ,  $A - C$ , and  $3A + 4B$ .



## Example

Compute  $AB$ , where

$$A = \begin{bmatrix} -1 & 3 \\ 4 & -2 \\ 5 & 0 \end{bmatrix} \quad \text{and} \quad B = \begin{bmatrix} -3 & 2 \\ -4 & 1 \end{bmatrix}.$$



## Exercise

Let  $A = \begin{bmatrix} 5 & 1 \\ 3 & -2 \end{bmatrix}$  and  $B = \begin{bmatrix} 2 & 0 \\ 4 & 3 \end{bmatrix}$ .

Demonstrate that  $AB \neq BA$ .