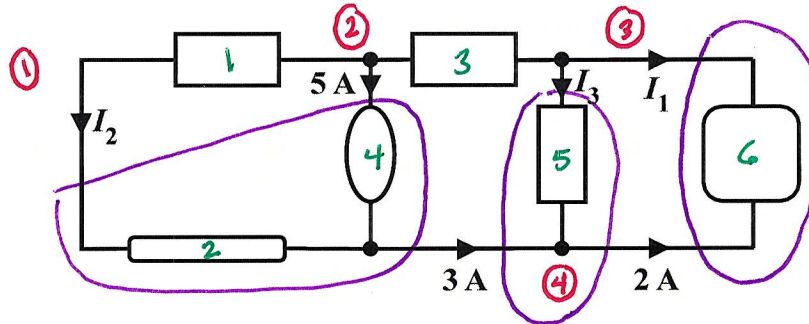


## Homework Problem #001

For the circuit shown below:



a. How many nodes does the circuit have?

4

b. How many components (also commonly called branches) make up the circuit?

6

c. Determine the value of  $I_1$ .

$$I_1 + 2A = 0 \Rightarrow I_1 = -2A$$

d. Determine the value of  $I_2$ .

$$I_2 + 5A - 3A = 0 \Rightarrow I_2 = -2A$$

e. Determine the value of  $I_3$ .

$$I_3 + 3A - 2A = 0 \Rightarrow I_3 = -1A$$