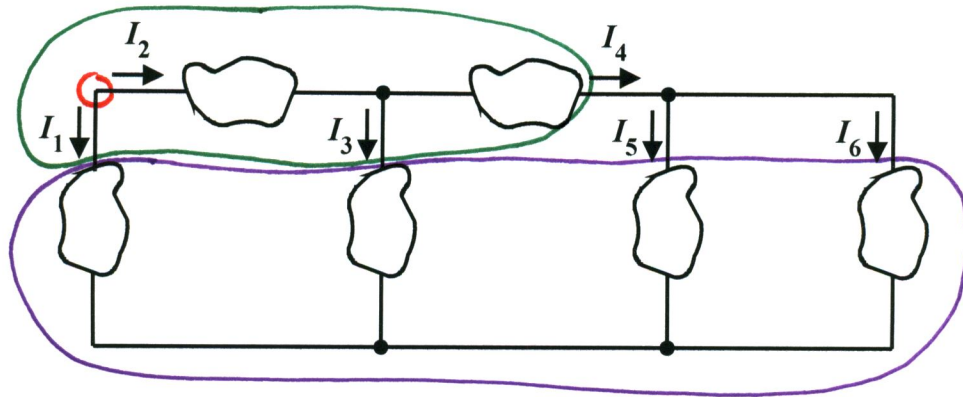# Problem #06

Given $I_1 = -1\,\text{mA}$, $I_3 = 0.5\,\text{mA}$, and $I_6 = 0.2\,\text{mA}$, find I_2, I_4 and I_5.

$$I_1 + I_2 = 0 \quad \Rightarrow \quad I_2 = -I_1 = -(-1\,\text{mA}) = 1\,\text{mA}$$

$$I_1 + I_3 + I_4 = 0 \quad \Rightarrow \quad I_4 = -I_1 - I_3$$
$$= -(-1\,\text{mA}) - (0.5\,\text{mA})$$
$$= 0.5\,\text{mA}$$

$$I_1 + I_3 + I_5 + I_6 = 0$$
$$\Rightarrow \quad I_5 = -I_1 - I_3 - I_6$$
$$= -(-1\,\text{mA}) - 0.5\,\text{mA} - 0.2\,\text{mA}$$
$$= 0.3\,\text{mA}$$