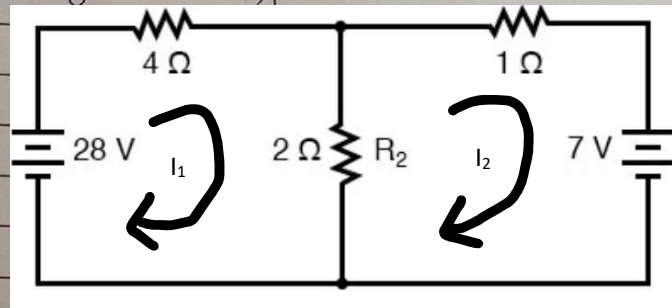


Analysis.

Qb

→ Using Mesh analysis find out the current flowing through the  $2\Omega$  resistor.

→



Consider a current  $I_1$  and  $I_2$  flowing through left and right loops respectively in clockwise direction.

Applying KVL in left loop

$$V_4 + V_2 = 28$$

$$4I_1 + 2(I_1 - I_2) = 28$$

$$6I_1 - 2I_2 = 28$$

$$3I_1 - I_2 = 14$$

Applying KVL in other loop

$$V_1 + 7 = V_2$$

$$1I_2 + 7 = 2I_1 - 2I_2$$

$$7 = 2I_1 - 3I_2$$

Solving above equations we get

$$I_1 = 1A$$

$$I_2 = 5A$$

$$\text{Thus net current} = I_1 - I_2 = 5 - 1 = 4A$$

