

# Homework for Analogue Electronics

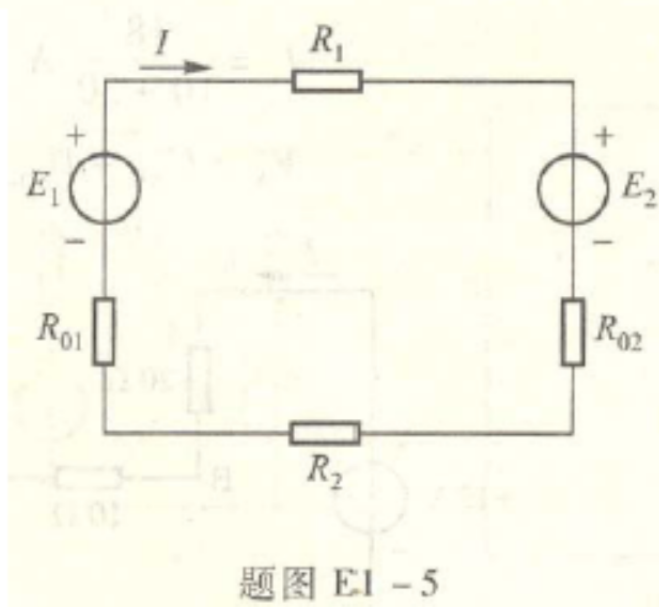
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E1 - 5 在题图 E1 - 5 所示电路中，已知： $I = 2 \text{ A}$ ， $E_1 = 48 \text{ V}$ ， $R_{01} = R_{02} = 0.5 \Omega$ ， $R_1 = 6 \Omega$ ， $R_2 = 5 \Omega$ 。求  $E_2$  的大小和方向，并说明在这个电路中哪个电源是吸收功率的，哪个电源是输出功率的。



题图 E1 - 5

**Solution** According to KVL:

$$-IR_1 - E_2 - IR_{02} - IR_2 - IR_{01} + E_1 = 0$$

$$-IR_1 - IR_{02} - IR_2 - IR_{01} + E_1 = E_2$$

$$E_2 = -12 - 1 - 10 - 1 + 48 = 24 \text{ V}$$

From the current direction, which is clock-wised, we can know that  $E_1$  is providing power,  $E_2$  is consuming power.