

Name:

1) CLASS(2)

Alessandro Volta connects a circuit as shown in fig. 1. $\mathcal{E} = 4 \text{ V}$, $R_1 = R_2 = 4 \Omega$, and $R_3 = R_4 = 8 \Omega$.

- a) Find V_{AC} .
- b) Find I_1 .
- c) Find V_{AB} .
- d) Find all other currents.

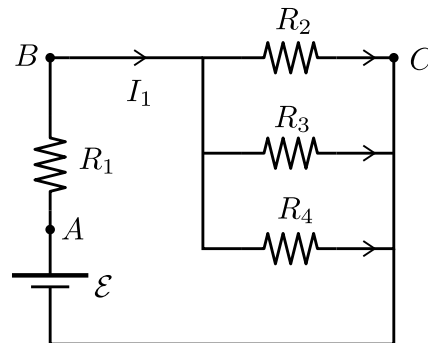


Figure 1: A circuit.

2) CLASS(2)

Ewald Georg von Kleist uses two $\mathcal{E} = 6 \text{ V}$ batteries and some 100Ω resistors to make a circuit as shown in fig. 2. Find the power dissipated in the R_4 resistor. [5 pts]

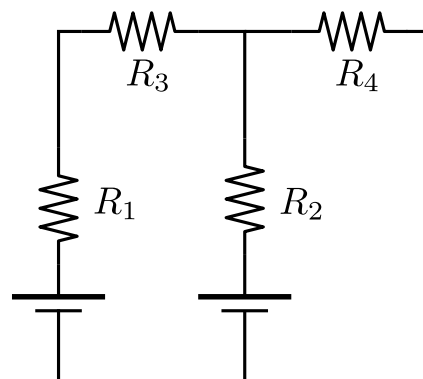


Figure 2: All resistors are equal.