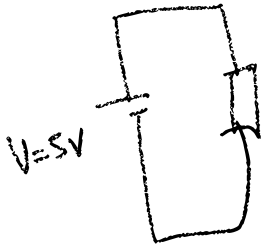


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$$dR = s \cdot dx$$

$$P = 200W$$

$$P = V \cdot I \Rightarrow I = \frac{P}{V} \Rightarrow$$

$$I = \frac{200W}{5V} \Rightarrow I = 40A$$

$$R = \frac{V}{I} = \frac{5V}{40A} \Rightarrow R = 0,125 \Omega$$

$$R = \int_0^L s \cdot dx \Rightarrow R = \frac{s}{2} x^2 \Big|_0^L \Rightarrow$$

$$R = \frac{s}{2} \cdot L^2 \Rightarrow 0,125 = \frac{s}{2} L^2 \Rightarrow$$

$$L^2 = \frac{2 \cdot 0,125}{s} \Rightarrow L = \pm \sqrt{0,05} \Rightarrow$$

$$L = 0,224m$$