A block of material has two electrodes on it. You connect a wire to each electrode and then connect these wires to a battery with an electric potential of 12V. You find that in 10 seconds the battery has pushed 5.0 Coulombs of charge through the block.
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Solution:
The current is

$$I = \frac{dq}{dt} = \frac{5.0\text{C}}{10\text{s}} = 0.5\text{A}.$$

So the power is

$$P = IV = (0.5\text{A})(12\text{V}) = 6\text{W}$$

and the resistance is

$$R = \frac{V}{I} = \frac{12\text{V}}{0.5\text{A}} = 24\Omega.$$