

Intro to ECE Toolbox

1 Ohm's law and some basics

1.1 Questions

What's the voltage at X ? What's the current through Y ? What's the resistance of Z ? How much power is used by F ?

1.2 Ohm's law

$$V = I \cdot R \qquad I = \frac{V}{R} \qquad R = \frac{V}{I} \qquad P = RI^2 = VI$$



1.3 Current Division

$$I_k = I_s \left(\frac{\frac{1}{R_k}}{\sum_i \frac{1}{R_i}} \right)$$

1.4 Voltage Division

1.5 Resistor Reduction

1.6 Component Order