

 $I_1 = I_2 + I_3$

Kirchhoff's second law stated that the sum of the potential differences around a closed circuit is equal to the sum of e.m.f.s. in that circuit.

This law is a law of conversation of energy.



By looking at this graph, I can conclude that as you increase the length of the wire, the resistivity of the wire increases.

R = eL/A E = RA/L Gradient = 1.94/1 = 1.94 D = Diameter = 0.27mm $A = \frac{\pi d^2}{4}$ $\frac{A = \pi^* (0.27 * 10^3)^2}{4}$ A = 5.725 * 10⁻⁸m² Gradient = e/A e = gradient * A e = 1.94 * (5.725 * 10⁻⁸) = 1.11 * 10⁻⁷Ω/m <u>100k Resistor</u> PTEVIEW FIGURE 6 9 01 15 PAGE 9 01 PAGE 9 01 PAGE 9 01 PAGE