

Chapter X Review Sheet

RS X

Definitions

Conductance (92)	Ohm (90)
Dynamic Resistance (90)	Ohmic Device (90)
Emf (93, 94)	Resistance (90)
FSD Current (95)	Sensitivity of galvanometer (95)
FSD Voltage (95)	Sensitivity of voltmeter (95)
Galvanometer (95)	Short Circuit (92, 94)
Internal Resistance (93, 94)	Shunt (92, 95)
Load (93, 94)	Static Resistance (90)
Mho (92)	Terminal Voltage (93, 94)

Discoveries

1. Sketch of a light bulb's voltage vs. current graph: (90)
2. Equation and sketch of a resistor's voltage vs. current graph: (90)
3. Equation and sketch of a battery's voltage vs. current graph: (93, 94)
4. Given the emf and resistance of a circuit, how can you predict the current? _____
5. Two secrets for using Ohm's equation successfully: (94)
6. The resistance of a series combination is _____ than either individual resistance.
The resistance of a parallel combination is _____ than either individual resistance. (90)
7. How does the resistance of a metal wire depend on: (90)
 - a. length? _____
 - b. thickness? _____
 - c. cross-sectional area? _____
 - d. temperature? _____
8. Electric power formulas:
 - a. -in terms of voltage and current: $P = \underline{\hspace{2cm}}$ (91, 92)
 - b. -in terms of voltage and resistance: $P = \underline{\hspace{2cm}}$ (90)
 - c. -in terms of current and resistance: $P = \underline{\hspace{2cm}}$ (90)
9. Formulas for equivalent resistance of resistor combinations: (94)
 - a. Series _____
 - b. Parallel _____
10. Conductance of a parallel combination: (92) _____
11. Emfs of series and parallel combinations of batteries: (93) _____
12. Given a battery's terminal voltage vs. current graph, how do you determine:
 - a. -the battery's emf? (94) _____
 - b. -the battery's maximum current? _____
 - c. -the battery's internal resistance? (94) _____
 - d. -the battery's maximum output power? (92, 94) _____
13. How can you decrease the sensitivity of an ammeter by a given factor? (92, 95)
14. How can you decrease the sensitivity of a voltmeter by a given factor? (95)
15. On a $y = kx^n$ -type curve, how can the slope of a tangent line be determined from the slope of a chord going through the origin? (22, 90, 92b)