B) Resistance (_____) Symbol - _____

1) R = _____ (equation)

V - _____ (voltage) between ends of conductor

I - _____ (amperes)

2) The resistance in a **wire** depends on:

a) **Resistivity** - *R* - - metals _____ to electron flow

b) **_____** (_____) of the wire

c) **_____)** of the wire

Resistance of a wire = $RL_{(meters)} / A\ (m^2)$

3) Resistance and Temperature

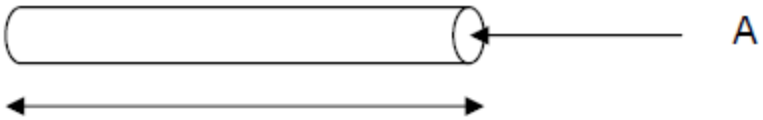
Metals When temperature _____, resistance _____

Nonmetals - When temperature _____,,

resistance _____

Superconductor - conductor with _____

Resistance in a Wire



1) What is the resistance of **.30 m length of copper wire** that has a **cross-sectional area of 5.0 x 10^{-5} m^2**?

a) How could you alter the dimensions of this wire to reduce the resistance?

To reduce the resistance in a wire you could _____

2) If the length of a wire were **halved**, how would that change the resistance of the wire?

3) Which material on your reference table would produce a wire that would **allow current to flow the best**?