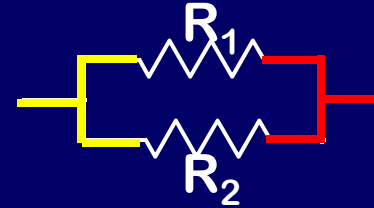# Summary

Series

Parallel

Wiring

Each resistor on the <u>same</u> wire.

Each resistor on a <u>different</u> wire.

Voltage

<u>Different</u> for each resistor.
$V_{total} = V_1 + V_2$

<u>Same</u> for each resistor.
$V_{total} = V_1 = V_2$

Current

<u>Same</u> for each resistor
$I_{total} = I_1 = I_2$

<u>Different</u> for each resistor
$I_{total} = I_1 + I_2$

Resistance

<u>Increases</u>
$R_{eq} = R_1 + R_2$

<u>Decreases</u>
$1/R_{eq} = 1/R_1 + 1/R_2$