

# Resistors Connected in Parallel



Find the equivalent resistance of two resistors connected in parallel.

- Current through resistors:  $I_1 + I_2 = I$
- Voltage across resistors:  $V_1 = V_2 = V$
- Equivalent resistance:  $\frac{1}{R} \equiv \frac{I}{V} = \frac{I_1}{V_1} + \frac{I_2}{V_2}$
- $\Rightarrow \frac{1}{R} = \frac{1}{R_1} + \frac{1}{R_2}$

