

# Physics 1214 - General Physics II

Quiz #6 - 2013.02.01

Solutions

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1. How is the equivalent resistance of a pair of resistors in series related to the individual resistances? What about if the resistors are in parallel?

In series:  $R_{\text{eq}} = R_1 + R_2$ , and in parallel:  $\frac{1}{R_{\text{eq}}} = \frac{1}{R_1} + \frac{1}{R_2}$ .

2. State both Kirchhoff's Junction (Point) Rule, as well as Kirchhoff's Loop Rule.

The Junction Rule: The algebraic sum of the currents into any junction is zero.

The Loop Rule: The algebraic sum of the potential differences in any loop must equal zero.