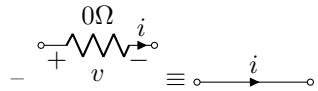# Lecture 5, Jan 26, 2022

Resistors Continued

- Extreme cases of Ohm's law
  1. $R = 0 \implies \forall i, v = 0$; this is called a short circuit
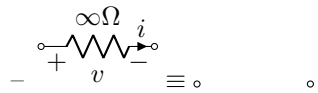   - A path with zero resistance is called an ideal conductor
     -
     - All parts of a circuit connected by ideal conductors can be considered the same node in a circuit
  2. $R \to \infty \implies \forall v, i = 0$
     - This is called an open circuit
     -

Structure of a Circuit

- Node: A junction of two or more circuit elements
- Path: Start from one node, and if no other node is passed through more than once except the first one which may be passed twice, this is a path
- Loop: A path that begins and ends at the same node that consists of at least 3 nodes