1 Electric Potential

Electric potential is defined as

$$V = \frac{\Delta E_p}{Q}$$

where V is measured in volts.

1.1 "Potential Walks"

The potential walk is a method for finding the electric potential in a given spot on a circuit.

Passing a Battery from Positive to Negative

When passing a voltage source from positive to negative, subtract u from v

Passing a Battery from Negative to Positive

When passing a battery voltage source from negative to positive, add u to v

Passing a Resistor from Positive to Negative

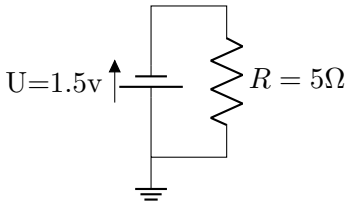
When passing a resistor (or other component) in the direction of the current, we subtract $I \times R$ from v

Passing a Resistor from Negative to Positive

When passing a resistor (or other component) against the direction of the current, we add $I \times R$ to v

1.2 Grounding

A *ground point* is a point where the circuit connects to the ground[1]. At a ground point $E_p = 0$.



[1] Ground is usually defined as the earth