Source: KBhPHYS201CircuitCalculations

1 | Kirkoff's Laws

Kirkoff's First Law

Definition 1 · **Kirkoff's First Law** **Sum of voltage in any closed loop should add up to 0**

As in, the sum of all voltage changes from Start => Start will add up to 0.

Kirkoff's Second law

Definition 2 · **Kirkoff's Second Law** **Net current flowing into a node is 0**

With a current i_0, when it flows into a junction like B, the current i_0 splits into i_2 and i_3

A Quick Kirkoff Excercise

Here's a circuit:

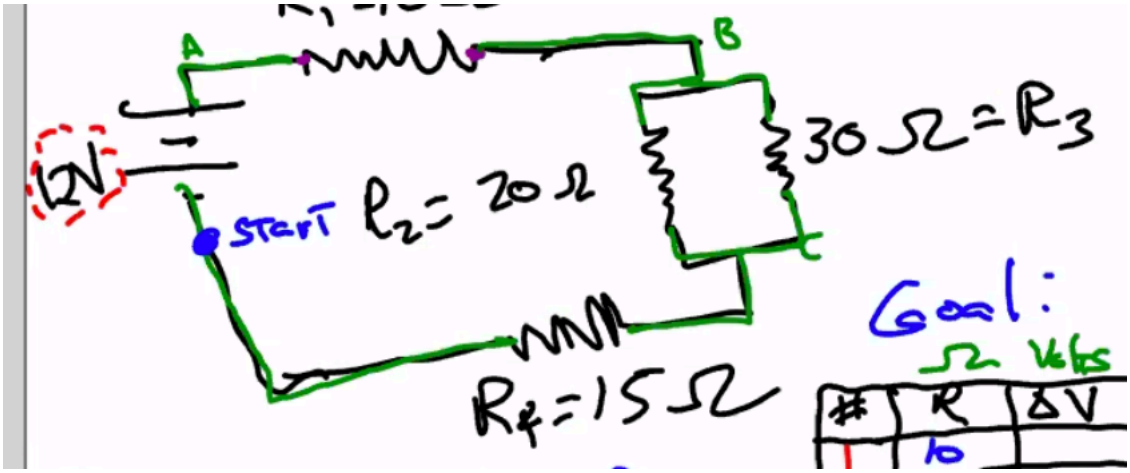

Figure 1: Screen Shot 2020-09-14 at 10.38.44 AM.png

So, to calculate the resistance and current at every point o
START at start

- $+12$
- $-I_1 * 10$ (per $I = \frac{\Delta V}{resistance}$)
- $-I_2 * 20$
- $-I_1 * 15$
- $= 0$

$I_1 - I_2 - I_3 = 0$, per Kirerbab's Second Law.