Superposition Principle

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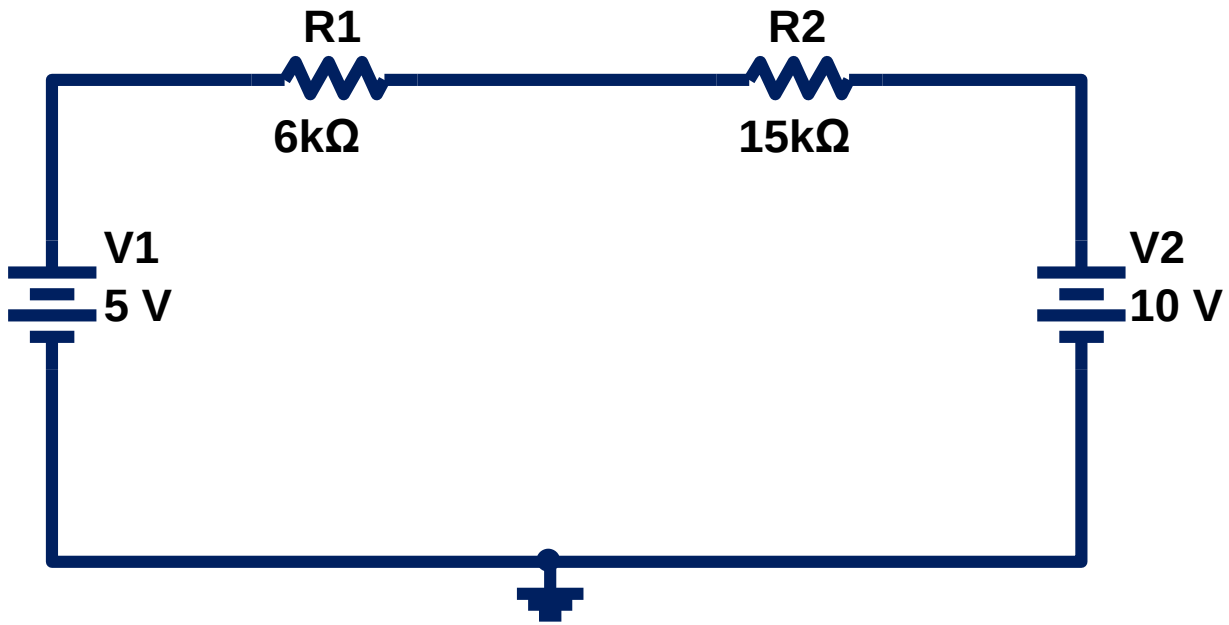
Voltage and Current

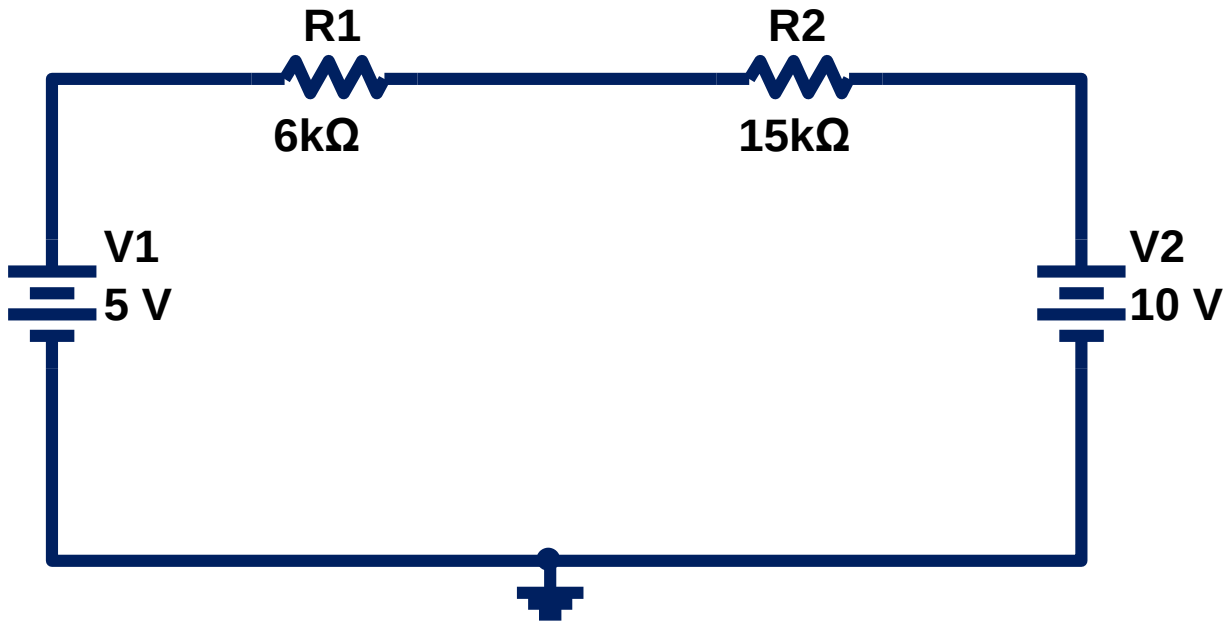
Voltage and current through any component is an equivalent sum of voltage and current due to all sources.



Voltage and Current

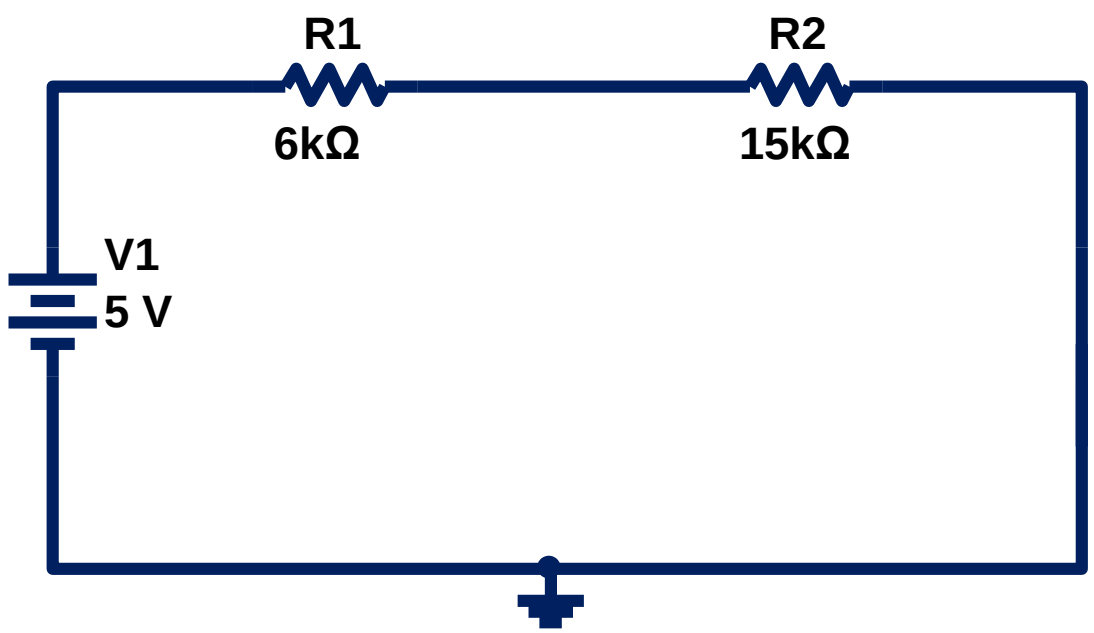
The voltage on **R1 is 1.429.**

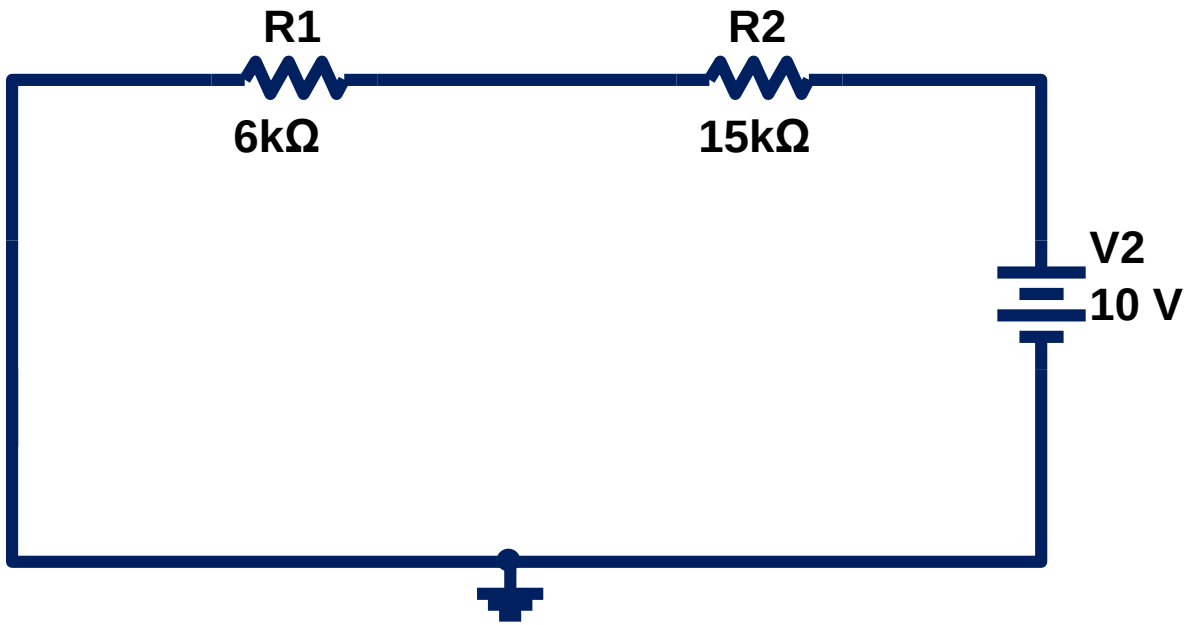
Similarly Voltage on R2 is 3.571



Voltage and Current

This voltage is combined effect Voltage source V1 and Voltage source V2.





Superposition Principle

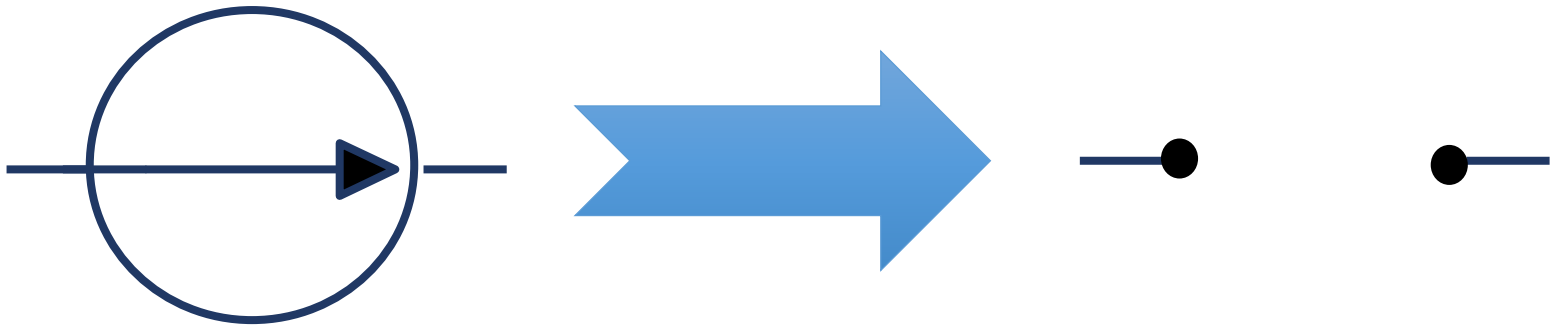
The fact that current and voltage on any source is combined effect of all resistors form basis of superposition principle.

How to apply Superposition Principle

- In superposition principle all current and voltage sources are suppressed except one source.
- Effect of every single source is observed one by one.
- After calculating all effects, in end they are added.

How to suppress Current source

- To suppress current source, simple replace it by open circuit



How to suppress Voltage source

- To suppress voltage source, simply replace it by short circuit

- For more details and problems visit http://www.ielectricalengineering.com/2015/07/circuit-analysis-with-superposition-principle.html