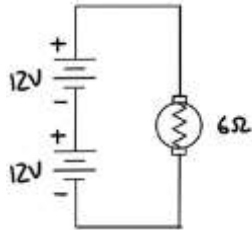


Voltage Sources in Series Circuits (23:38)

Describe a series aiding relationship of DC voltage sources. Indicate whether this arrangement is additive or subtractive.

Determine the voltage across, the current through, and the power dissipated by the electrical load in this system.

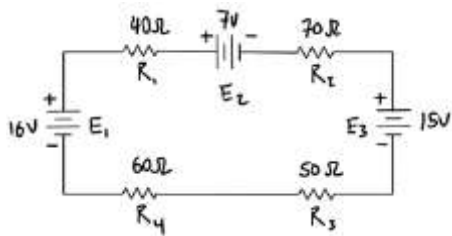


Describe how batteries and solar panels make use of series aiding relationships. Describe how current flows through series aiding arrangements of sources.

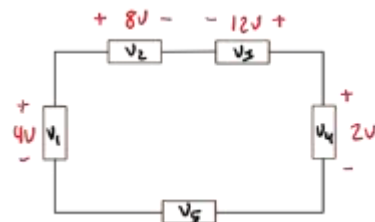
Describe a series opposing relationship of voltage sources. Indicate whether this arrangement is additive or subtractive.

Explain the purpose of the variable current controlling resistor in this series opposing arrangement of sources. Describe the consequence of no current controlling element between two sources of different magnitudes in a series opposing relationship.

Use Kirchhoff's Voltage Law to determine the current through and the voltage drop across all elements in this system.



Use Kirchhoff's Voltage Law to determine the voltage drop unknown element 5. If unknown element 5 is a 30Ω resistor determine the nature and value of the remaining elements.



Explain how the Tektronix CPS250 Triple Output Power Supply acts in series mode.