

Main Ideas, Key Points, Questions:

After watching the video segment, write down key points, main ideas, and big questions.

Objective(s):

- *Compare and contrast parallel circuits with series circuits in terms of the current through and voltage across each resistor.*
- *Understand how current and voltage change with the orientation of the resistors in a complex circuit.*

Notes:

During the video segment, use words, phrases, or drawings to take notes.

Summary:

After watching the video segment, write at least three sentences explaining what you learned. You may ask yourself: "If I was going to explain this to someone else, what would I say?"

Answer the following.

1. How does a parallel circuit compare to a series circuit in terms of the paths through which current can flow?

2. What is the same in each branch of a parallel circuit?

3. How do you determine the total current flowing through a parallel circuit if you know the individual currents in each branch?

4. If one branch of a parallel circuit has more resistance than the other branches, how does the amount of current flowing through that branch compare to the other branches?

5. If identical light bulbs are wired in parallel, how do they compare to one another in terms of brightness? How is this brightness affected if more bulbs are added to the circuit?

6. Write the equation for finding the equivalent resistance of multiple resistors in parallel:

Name:

Date:

7. How does the total resistance in a parallel circuit compare to the combined values of the individual resistors?

8. Why are houses wired in parallel instead of in series?

9. When circuits have some components that are wired in series and some that are wired in parallel, they are called _____ circuits.

10. What is the same about resistors that are wired in series to one another in a circuit?

11. What is the same about branches that are wired parallel to one another in a circuit?
