

# Free reading Series and parallel circuits answers [PDF]

in this introduction to parallel resistance circuits we will explain the three key principles you should know voltage the voltage is equal across all components in a parallel circuit current the total circuit current equals the sum of the individual branch currents in this tutorial we ll first discuss the difference between series circuits and parallel circuits using circuits containing the most basic of components resistors and batteries to show the difference between the two configurations parallel circuits are a type of electrical circuit where multiple paths exist for the electric current to flow first let s imagine a river branching into several smaller streams similarly in a parallel circuit the electric current divides and flows through multiple pathways before merging back together a circuit composed solely of components connected in series is known as a series circuit likewise one connected completely in parallel is known as a parallel circuit many circuits can be analyzed as a combination of series and parallel circuits along with other configurations this video shows a lecturer discussing a simple circuit with a battery and a pair of resistors in parallel he emphasizes that electrons flow in the direction opposite to that of the positive current

and also makes use of the fact that the voltage is the same at all points on an ideal wire parallel connected circuits consist of two or more active and passive devices connected in parallel in these circuits voltage across any branch remains the same but the current flowing through each branch varies the total current is equal to the sum of currents through each branch series connection of resistance in a parallel circuit each device is connected in a manner such that a single charge passing through the circuit will only pass through one of the resistors this lesson focuses on how this type of connection affects the relationship between resistance current and voltage drop values for individual resistors and the overall resistance explore the intriguing world of parallel resistors in circuits learn how current splits and combines in different branches and how voltage remains constant across resistors uncover the formula for total resistance and apply it to solve real world problems created by sal khan questions tips thanks want to join the conversation sort by in section 9 1 we limited ourselves to relatively simple circuits essentially nothing more than a battery and a single lightbulb the purpose of this chapter is to introduce you to more complex circuits containing multiple resistors or voltage sources in series in parallel or both the simplest combinations of resistors are series and parallel connections figure 10 3 1 in a series circuit the output current of the first resistor flows into the input of the second resistor therefore the current is the same in each resistor this physics video exam prep

explains series and parallel circuits it contains plenty of examples equations and formulas showing you how to solve it with introducing series circuit basics when components are connected in series the electric current must take a single path the series circuit below consists of a dc voltage source with three resistors connected in series series circuit the electric current has only a single path through the resistors therefore it is a series circuit about transcript ohm s law is  $v = ir$  where  $v$  voltage  $i$  current and  $r$  resistance ohm s law allows you to determine characteristics of a circuit such as how much current is flowing through it if you know the voltage of the battery in the circuit and how much resistance is in the circuit created by sal khan questions tips thanks a parallel circuit is way of connecting components on separate branches so the current can take different routes around the circuit electrical circuits can be connected in parallel or in a parallel circuit is also a closed circuit where the current divides into two or more paths before coming back together to complete the full circuit here the wiring is configured so that each device is in constant contact with the main circuit pathway series and parallel circuits simple circuits ones with only a few components are usually fairly straightforward for beginners to understand but things can get sticky when other components come to the party where s the current going what s the voltage doing can this be simplified for easier understanding fear not intrepid reader a parallel circuit has two or more branches that all lead from point a to point b a simple exam prep

electrons divides to flow through multiple branches then merge back into one stream on the other side parallel circuit an electrical path that branches so that the current divides and only part of it flows through any branch the voltage or potential difference across each branch of a parallel circuit is the same but the currents may vary

# **parallel circuits and the application of ohm s law**

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in this introduction to parallel resistance circuits we will explain the three key principles you should know voltage the voltage is equal across all components in a parallel circuit current the total circuit current equals the sum of the individual branch currents

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in this tutorial we ll first discuss the difference between series circuits and parallel circuits using circuits containing the most basic of components resistors and batteries to show the difference between the two configurations

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parallel circuits are a type of electrical circuit where multiple paths exist for the electric current to flow

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first let s imagine a river branching into several smaller streams similarly in a parallel circuit the electric current divides and flows through multiple pathways before merging back together

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this video shows a lecturer discussing a simple circuit with a battery and a pair of resistors in parallel he emphasizes that electrons flow in the direction opposite to that of the positive current and also makes use of the fact that the voltage is the same at all points on an ideal wire

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parallel connected circuits consist of two or more active and passive devices connected in parallel in these circuits voltage across any branch remains the same but the current flowing through each branch varies the total current is equal to the sum of currents through each branch series connection of resistance

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in a parallel circuit each device is connected in a manner such that a single charge passing through the circuit will only pass through one of the resistors this lesson focuses on how this type of connection affects the relationship between resistance current and voltage drop values for individual resistors and the overall resistance

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explore the intriguing world of parallel resistors in circuits learn how current splits and combines in different branches and how voltage remains constant across resistors uncover the formula for total resistance and apply it to solve real world problems created by sal khan questions tips thanks want to join the conversation sort by

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in section 9 1 we limited ourselves to relatively simple circuits essentially nothing more than a battery and a single lightbulb the purpose of this chapter is to introduce you to more complex circuits containing multiple resistors or voltage sources in series in parallel or both

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the simplest combinations of resistors are series and parallel connections figure 10 3 1 in a series circuit the output current of the first resistor flows into the input of the second resistor therefore the current is the same in each resistor

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introducing series circuit basics when components are connected in series the electric current must take a single path the series circuit below consists of a dc voltage source with three resistors connected in series series circuit the electric current has only a single path through the resistors therefore it is a series circuit

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about transcript ohm s law is  $v = ir$  where  $v$  voltage  $i$  current and  $r$  resistance ohm s law allows you to

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determine characteristics of a circuit such as how much current is flowing through it if you know the voltage of the battery in the circuit and how much resistance is in the circuit created by sal khan questions tips thanks

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a parallel circuit is way of connecting components on separate branches so the current can take different routes around the circuit electrical circuits can be connected in parallel or in

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a parallel circuit is also a closed circuit where the current divides into two or more paths before coming back together to complete the full circuit here the wiring is configured so that each device is in constant contact with the main circuit pathway

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series and parallel circuits simple circuits ones with only a few components are usually fairly straightforward for beginners to understand but things can get sticky when other components come to the party where s the current going what s the voltage doing can this be simplified for easier understanding fear not intrepid reader

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a parallel circuit has two or more branches that all lead from point a to point b a single stream of electrons divides to flow through multiple branches then merge back into one stream on the other side

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parallel circuit an electrical path that branches so that  
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the current divides and only part of it flows through any branch the voltage or potential difference across each branch of a parallel circuit is the same but the currents may vary

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