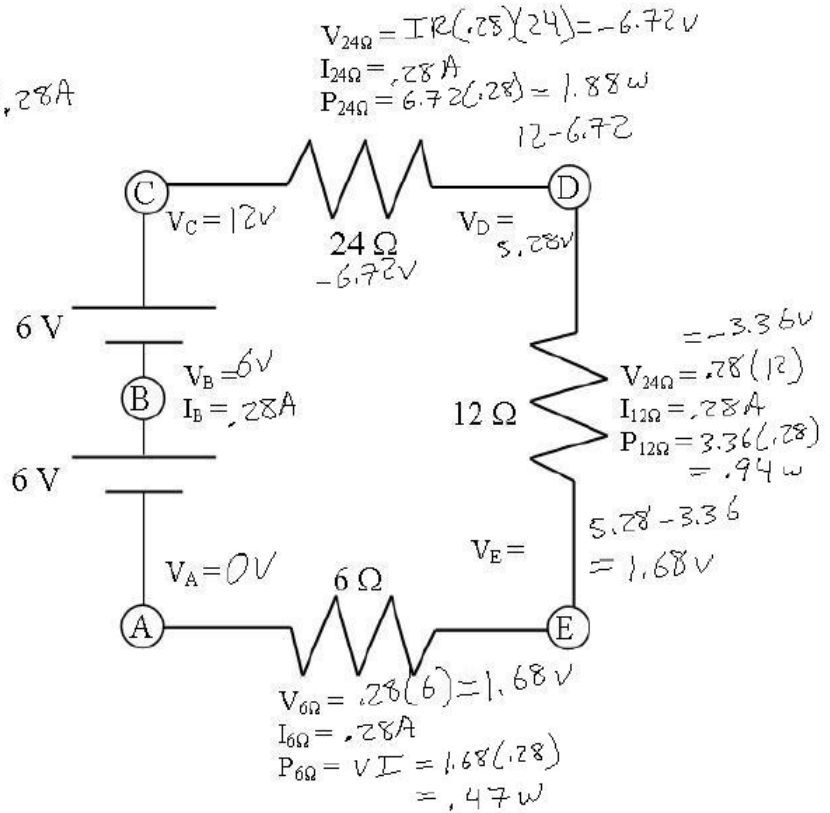


Series Circuit Practice

$V = IR$ $P = VI$

1. What is the total voltage? $12V$
2. What is the total resistance? 42Ω
3. Calculate the total current. $I = .28A$
4. Where in the circuit is the current the greatest?
same throughout
5. If one of the batteries is removed, how would the current change? *less V means less I*
6. If one of the resistors is decreased, how would the current change? *less R means more I*
7. On the circuit, calculate the voltage and power used by each resistor.
8. How much voltage is used by the 12Ω resistor? $3.36V$
9. What is the voltage at point D? $12 - 6.72 = 5.28V$
10. How much power is used by the whole circuit?
 $P = VI = 12(.28) = 3.36W$



Parallel Circuit Lab—Calculations 1

1. What is the total voltage? $18V$
2. How does the voltage change across a wire? *doesn't*
3. What is the voltage at E? $18V$
4. What is the voltage at F? $18V$
5. What is the voltage at H? $0V$
6. A. Which resistor has the greatest voltage across it? *same*
B. Why? *objects in par. have same voltage*
7. Which resistor has the greatest current? 3Ω
8. Calculate the current in each branch. Label each current with an arrow.
9. What is the current from D to I? $3A$
10. What is the current flowing from I to A? $11A$
11. What is the total current? $11A$
12. Using the total voltage and total current, calculate the total resistance.
 $R = \frac{V}{I} = \frac{18}{11} = 1.63\Omega$
13. Since $P = VI$, calculate the power used by the 9Ω resistor.
 $P = 18(2) = 36W$
14. Calculate the total power used by the circuit. $P = VI = 18(11) = 198W$

