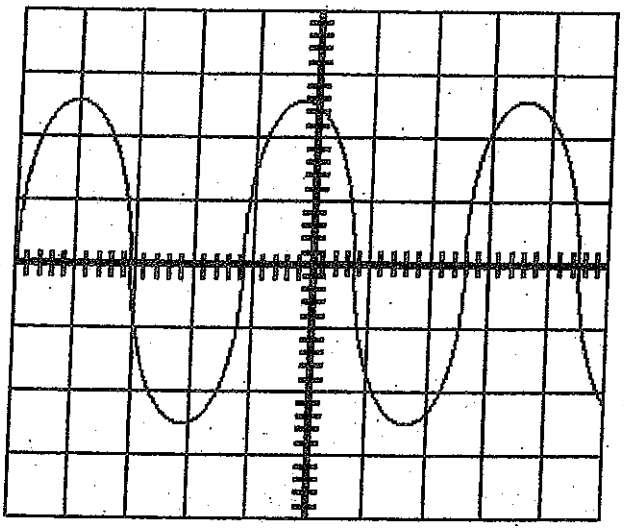
Ranken Technical College

Name _____
Date _____ Class _____

From the scope drawings determine the following values

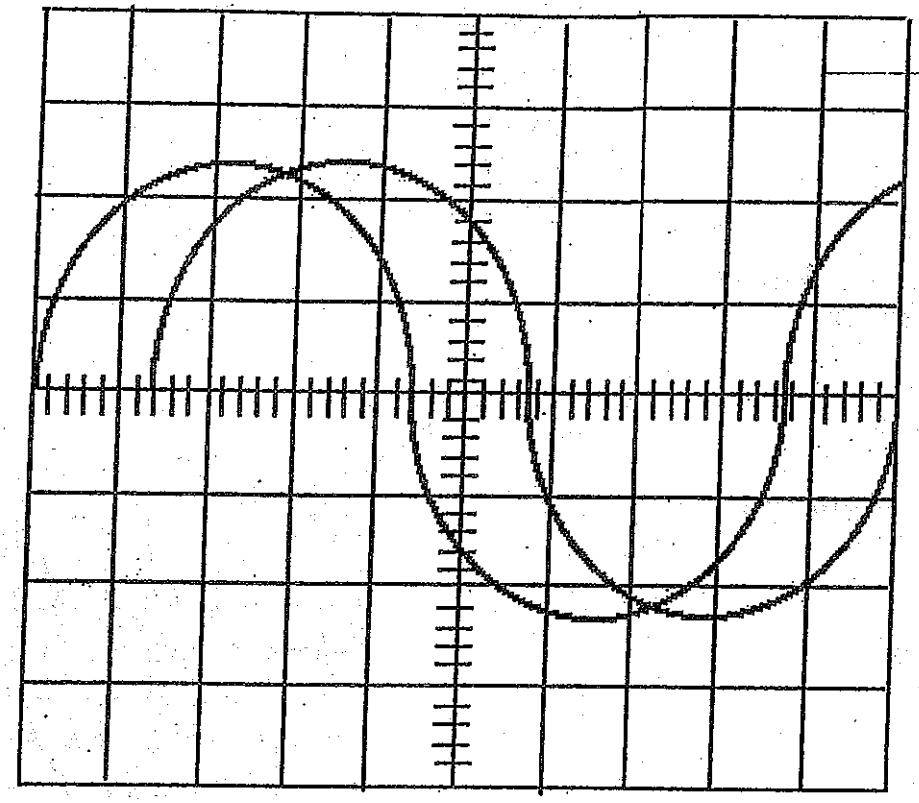
Time/cm 20us
Volt/cm 50mV



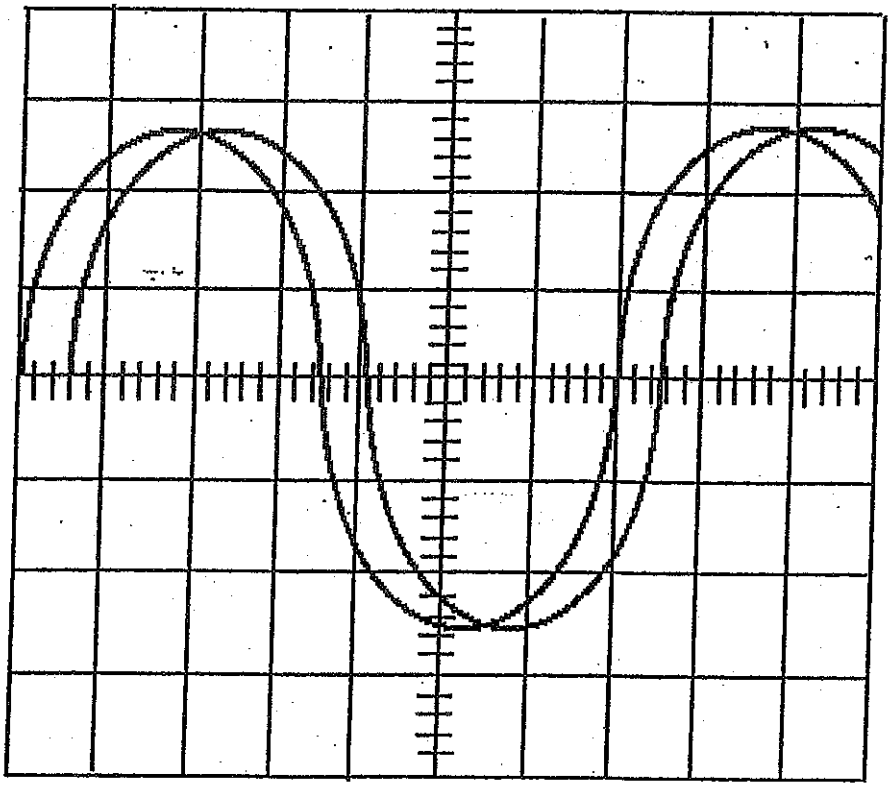
time _____ frequency _____ Vpp _____ Vp _____ Vrms _____

Name _____ Date _____ Class _____

\lab\phase1



Phase Angle = _____ degrees.



Phase Angle = _____ degrees.

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Duty C Troubleshooting 1

1. From the drawing below answer the following questions

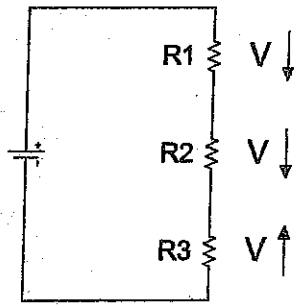
   a. Total current increase / decrease

   b. What is the malfunction open / short

   c. Define the malfunction _____

   d. Knowing the type of malfunction, what will the voltage drops do across the components that do not have a change in resistance increase / decrease

   e. Which component's voltage does not follow the criteria in step D. R1 R2 R3



2. From the drawing below answer the following questions

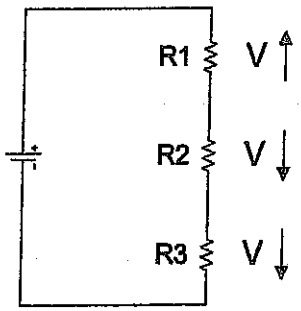
   a. Total current increase / decrease

   b. What is the malfunction open / short

   c. Define the malfunction _____

   d. Knowing the type of malfunction, what will the voltage drops do across the components that do not have a change in resistance increase / decrease

   e. Which component's voltage does not follow the criteria in step D. R1 R2 R3



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Duty C Troubleshooting 1

3. From the drawing below answer the following questions

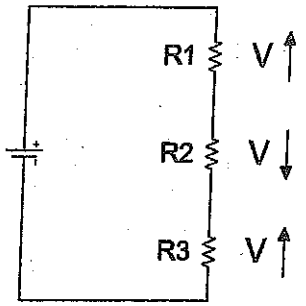
   a. Total current increase / decrease

   b. What is the malfunction open / short

   c. Define the malfunction _____

   d. Knowing the type of malfunction, what will the voltage drops do across the components that do not have a change in resistance increase / decrease

   e. Which component's voltage does not follow the criteria in step D. R1 R2 R3



4. From the drawing below answer the following questions

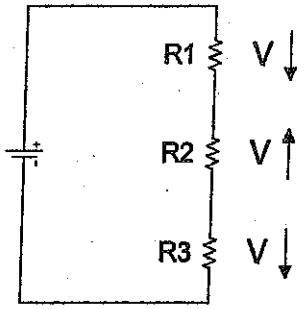
   a. Total current increase / decrease

   b. What is the malfunction open / short

   c. Define the malfunction _____

   d. Knowing the type of malfunction, what will the voltage drops do across the components that do not have a change in resistance increase / decrease

   e. Which component's voltage does not follow the criteria in step D. R1 R2 R3



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Duty C Troubleshooting 1

5. From the drawing below answer the following questions

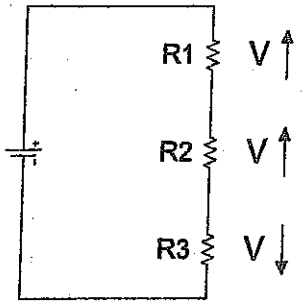
   a. Total current increase / decrease

   b. What is the malfunction open / short

   c. Define the malfunction _____

   d. Knowing the type of malfunction, what will the voltage drops do across the components that do not have a change in resistance increase / decrease

   e. Which component's voltage does not follow the criteria in step D. R1 R2 R3



6. From the drawing below answer the following questions

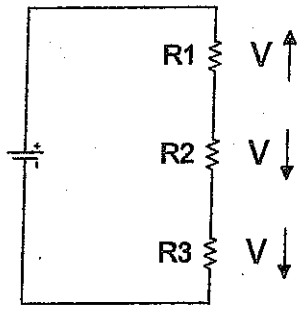
   a. Total current increase / decrease

   b. What is the malfunction open / short

   c. Define the malfunction _____

   d. Knowing the type of malfunction, what will the voltage drops do across the components that do not have a change in resistance increase / decrease

   e. Which component's voltage does not follow the criteria in step D. R1 R2 R3



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Name _____
Date _____ Class _____

1. Band 1 - Green
   Band 2 - Yellow
   Band 3 - Brown
   Band 4 - None

   Resistor Value = _____
   Tolerance in % = _____
   Tolerance in Ohms = _____
   Maximum Resistor Value = _____
   Minimum Resistor Value = _____

2. Band 1 - Brown
   Band 2 - Black
   Band 3 - Orange
   Band 4 - Silver

   Resistor Value = _____
   Tolerance in % = _____
   Tolerance in Ohms = _____
   Maximum Resistor Value = _____
   Minimum Resistor Value = _____

3. Band 1 - Gray
   Band 2 - Red
   Band 3 - Silver
   Band 4 - Gold

   Resistor Value = _____
   Tolerance in % = _____
   Tolerance in Ohms = _____
   Maximum Resistor Value = _____
   Minimum Resistor Value = _____

4. Band 1 - Violet
   Band 2 - Blue
   Band 3 - Gold
   Band 4 - Silver

   Resistor Value = _____
   Tolerance in % = _____
   Tolerance in Ohms = _____
   Maximum Resistor Value = _____
   Minimum Resistor Value = _____

5. Band 1 - Blue
   Band 2 - Brown
   Band 3 - Yellow
   Band 4 - None

   Resistor Value = _____
   Tolerance in % = _____
   Tolerance in Ohms = _____
   Maximum Resistor Value = _____
   Minimum Resistor Value = _____

Ranken Technical College

General Knowledge Lab quiz

1. In a series circuit voltage adds, current adds and resistance adds.

   True or False

2. In a parallel circuit branch current adds, Voltage stays the same and if another branch is added the total resistance will go down.

   True or False

3. In a series circuit if another resistor is added to the circuit the total resistance will go up. Therefore the circuit current will.
   A. Go up
   B. Go down

4. In a Inductive circuit it is said that there is a phase shift between current and voltage across the resistor.

   True or False

5. In a Capacitive circuit it is said that there is no phase shift between current and voltage across the resistor.

   True or False

6. In a Inductive circuit across the inductor there is a phase shift the current will lead the voltage.

   True or False

7. In a Capacitive circuit across the Capacitor there is a phase shift the current will lead the voltage.

   True or False

8. A(n) open can best be defined as a increase in resistance therefore a decrease in current.

   True or False

9. A(n) short can best be defined as a increase in resistance therefore a decrease in current.

   True or False

10. When reading voltage across a(n) OPEN or an open switch you should read source voltage.

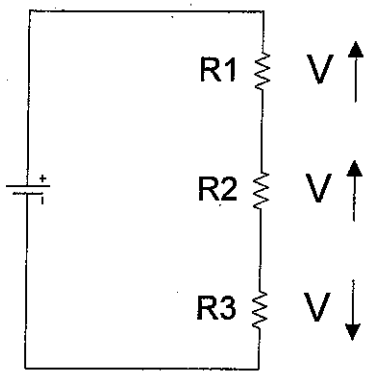
    True or False

From the drawing answer the following questions:

11. Total current.

    A. increase

    B. decrease



12. What is the malfunction

    A. open

    B. short

13. Is the resistance of R1 & R2 going down causing the voltage to rise on R1 & R2 .

    A. Yes

    B. No

14. Knowing the type of malfunction, what will the voltage drops do across Resistors R1 & R2 (that do not have a change in resistance).

    A. increase

    B. decrease

15. Which resistor has the malfunction.

A. R1

B. R2

C. R3

16. When capacitors are placed in a series the capacitance will add to solve for total capacitance.

A. True

B. False

17. When capacitors placed in a parallel circuit the capacitance will add like resistors do in a series circuit.

A. True

B. False

18. When inductors are placed in series you must use the reciprocal method to solve for total inductance.

A. True

B. False

19. In a series circuit voltage adds, current stays the same and resistance adds.

A. True

B. False

20. In a series circuit if another resistor is added to the circuit and the power supply is set to (10V) The circuit total current will ?

A. Go down

B. Go up