

Physics 112
Quiz #14
October 16, 2000

Name: _____

IF YOU WANT A QUESTION GRADED OUT OF THREE POINTS (-1 [MINUS ONE] FOR WRONG ANSWER!!) WRITE "3" IN SPACE PROVIDED ON EACH QUESTION.

1. A 2-ohm resistor and a 3-ohm resistor are connected in parallel to a 12-volt battery. How much current flows through the 3-ohm resistor? *No partial credit. Your answer must be within 10% of the correct answer to receive credit. Units missing or incorrect: -1 point*

Answer: _____

2. A 10-ohm and a 5-ohm resistor are connected in series to a 30-volt battery. How much power is dissipated in the 5-ohm resistor?
- A. 2 W
 - B. 10 W
 - C. 20 W
 - D. 30 W
 - E. 40 W
 - F. 60 W
3. Resistor A has twice the resistance of resistor B. They are connected in *parallel* to a battery. Then:
- A. Resistor A dissipates four times as much power as resistor B.
 - B. Resistor A dissipates twice as much power as resistor B.
 - C. Resistor A dissipates the same amount of power as resistor B
 - D. Resistor A dissipates half as much power as resistor B.
 - E. Resistor A dissipates one fourth as much power as resistor B

Grade out of 3? Write "3" here: _____

4. A 5-ohm and a 2-ohm resistor are connected in series to a battery. In a separate circuit, a 5-ohm and a 2-ohm resistor are connected in parallel to a battery with the *same* voltage. In which resistor is the *most power* being dissipated?
- A. The 5-ohm resistor in the series circuit.
 - B. The 5-ohm resistor in the parallel circuit.
 - C. The 2-ohm resistor in the series circuit.
 - D. The 2-ohm resistor in the parallel circuit.
 - E. Both resistors in the series circuit, which dissipate the same amount of power.
 - F. Both resistors in the parallel circuit, which dissipate the same amount of power.
 - G. All four resistors dissipate the same amount of power.

Grade out of 3? Write "3" here: _____