

**PHY 106 Test 5 July 28, 2005 20 minutes**

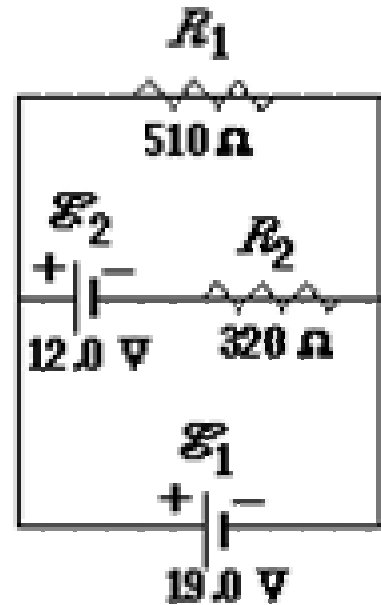
La Salle University

Dr. R. DiDio

---

1. In the following circuit

- Label appropriate currents, draw loops and label nodes
- Write down Kirchoff's rules
- Calculate the total currents leaving the power supplies and the total power output of each power supply.
- Calculate the voltage across, current passing through, and power dissipated in each resistor



2. In problem #1,  $R_1$  is actually the equivalent resistance of two parallel resistors, one of which is 1 k-ohm. What is the other resistance?)

3. Three light bulbs are connected to a battery. If bulb 2 burns out, what happens to the brightness of the remaining bulbs? Explain!

