Year 9 Science: Electric circuits: charge, current, voltage and resistance

Name: _____ Date: _____

Try these without your notes first, then check the answer key.

Practice

1. A 9 V battery is connected to a 3 Ω resistor. What current flows?

2. In a series circuit an ammeter before the first lamp reads 0.4 A. What does an ammeter after the second lamp read?

3. A parallel circuit has two branches carrying 0.3 A and 0.5 A. What current comes out of the battery?

4. One lamp in a string of three blows. What happens to the other two if the string is in series, and if it is in parallel?

5. A balloon rubbed on hair sticks to the ceiling. Explain why, using the word electrons.

Fix the mistake

6. Correct this statement: "Current gets used up by the first bulb, so less comes out the other side."

7. Correct this statement: "Adding a lamp in parallel makes all the lamps dimmer, just like in series."

8. Correct this statement: "With 6 V across 3 Ω, the current is 6 × 3 = 18 A."

9. Correct this statement: "A rubbed balloon becomes positive because it picks up protons from the jumper."