Sparkle Labs

RESISTOR **LED**
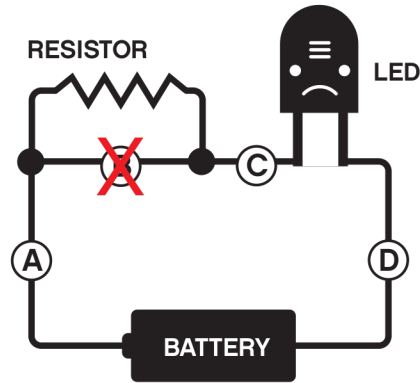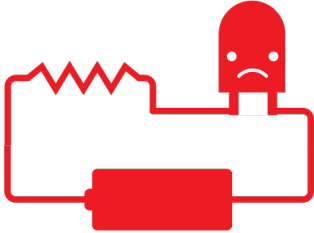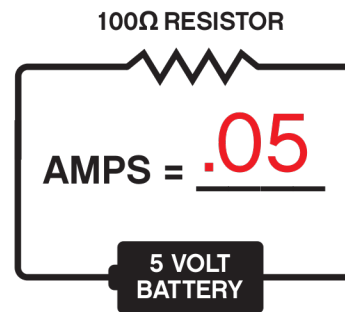
A **C** **D**

BATTERY

1 **SHORT CIRCUIT**
Mark an **X** over any lines that need to be removed in order to create a working LED circuit.
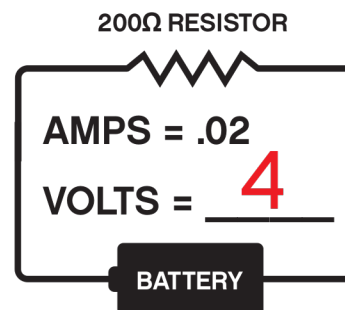
2 **CALCULATE AMPS**
Use Ohm's Law to determine how many amps are flowing through this circuit.

$5 \div 100 = .05$

100Ω RESISTOR

AMPS = .05

5 VOLT BATTERY

3 **CALCULATE VOLTAGE**
Use Ohm's Law to determine how many volts are supplied by the battery.

$.02 \times 200 = 4$

200Ω RESISTOR

AMPS = .02

VOLTS = 4

BATTERY

4 **WHICH HAS MORE RESISTANCE**
Circle the diagram with higher resistance.

$100 + 100 = \textbf{200}$

$\dfrac{1}{200} + \dfrac{1}{200} = \dfrac{2}{200} = \dfrac{1}{\textbf{100}}$

BATTERY 100Ω 100Ω

BATTERY 200Ω 200Ω