

LESSON 22

Measure the current

Watch video Lesson 22



In lessons 22, 23, and 24, we are going the **amount of current is the same** everywhere in a series circuit.

In this series circuit, the current flows clockwise from negative terminal of the 9-battery through the Red LED, **through the multimeter**, through a 390 ohm resistor and back to the battery.

Step#1: Build the circuit on a Solderless CB but do not connect the meter into the circuit yet.

Step#2: With the meter **OFF**, set the dial position to **20 mA**.

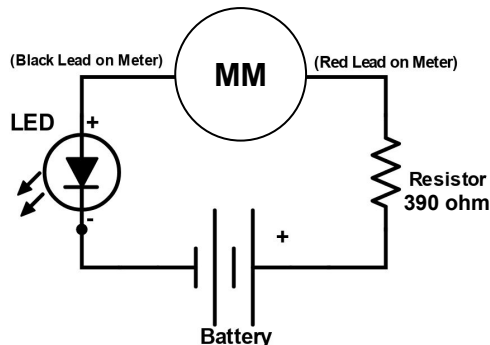
Step#3: Insert the Black meter lead.



Practice Quiz

Measure current flowing between the LED and the resistor.

Circuit Schematic



lead into the **COM** socket and the Red meter lead into the **V Ω mA** socket.

Step#4: Turn the meter **ON**.

Step#5: The circuit is still incomplete, or open, until you touch the Red probe tip to the Anode of the LED and the Black probe tip to one side of the resistor (as shown, in the picture on the right, by the Red and Black alligator clips). The LED will light up and your meter display should show approximately 18 mA or 0.018 Amps. The meter on the right shows 17.82 mA or 0.01782 Amps.

Insert the MM into the circuit as shown and read the display.



The meter shows 17.82 mAmps

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Answer these questions	Activity Page	Build a circuit and measure the current	22b
<p>(1) To what dial position did you set your multimeter to measure the current in this circuit?</p> <p>_____</p> <p>(2) To measure current with this meter, the Black probe lead is plugged into the</p> <p>_____</p> <p>(3) To convert milliAmps to Amps, divide the milliAmps by 1000. So, how many <u>Amps</u> is 17.82 milliAmps?</p> <p>_____</p> <p>(4) To measure current with this meter, the Red probe lead is plugged into the</p> <p>_____</p>	<p>(5) In this circuit, Is the Red meter probe tip is touching the LED or the resistor?</p> <p>_____</p> <p>(6) The Black lead from the battery snap is connected to the _____ of the LED?</p> <p>_____</p> <p>(7) If you disconnect the meter from this circuit, will the LED continue to stay lit?</p> <p>_____</p> <p>(8) Before you set the dial position on this multimeter, be sure to turn the meter ON/OFF switch to</p> <p>_____.</p> <p>Copyright Mr Circuit Technology 2023</p>	<p>(9) How many milliAmps is it showing on the multimeter display on page 22a?</p> <p>_____</p> <p>(10) How many milliAmps was showing on <u>your</u> multimeter display when you built this circuit?</p> <p>_____</p>	