Meter-reading practice

Use the symbols reference and the virtual lab. Show your reasoning and include units.

Name: _____ Date: _____

1. Convert 118.3 mA to amperes.

2. Convert 4.70 kΩ to ohms.

3. Convert 1.200 MΩ to ohms.

4. Convert 24.6 mV to volts.

5. Which two displayed readings indicate opposite relative polarity: 12.60 V and -12.60 V? Explain the minus sign.

6. What does OL mean in resistance mode? Is it equal to zero ohms?

7. In the virtual continuity exercise, an intact wire shows 0.2 Ω. Does the buzzer sound?

8. A high-resistance wire shows 85.0 Ω. Does silence prove it is open? Explain.

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9. Compare a 40 Ω path with a 39 Ω path on the fictional meter. Which causes a beep?

10. A 4,700 Ω resistor displays OL with the lowest manual resistance range selected. What does auto range display?

11. In a voltage measurement, does the meter span two circuit points or become a series link?

12. In the virtual series-current exercise, why is the dedicated gap required?

13. Why does our trainer reject resistance measurements while its fictional source is on?

14. Two identical 330 Ω resistors are in parallel. Predict the equivalent resistance.

15. Why might an in-circuit resistance measurement differ from the isolated component value?