1. Internal Resistance

A real battery (10 V, 1 Ω) can be regarded as an ideal battery (10 V, 0 Ω) in series with a resistor (1 Ω).

a) What is the reading of the ampere meter? (2pt)

b) What is the reading of the voltage meter? (4pt)
2. Just like in the lab, we create a circuit that measures battery’s internal resistance. After turning the switch on the Potential meter shows 8 V and the Current meter shows 2.5 A. Find the internal resistance of the battery. (2pt)

![Circuit Diagram](image)

3. Kirchhoff’s Law

According to section H of the lab manual, when is it necessary to use Kirchhoff’s rule? (2pt)

By the way, it’s Kirchhoff, not “Kirchoff”.