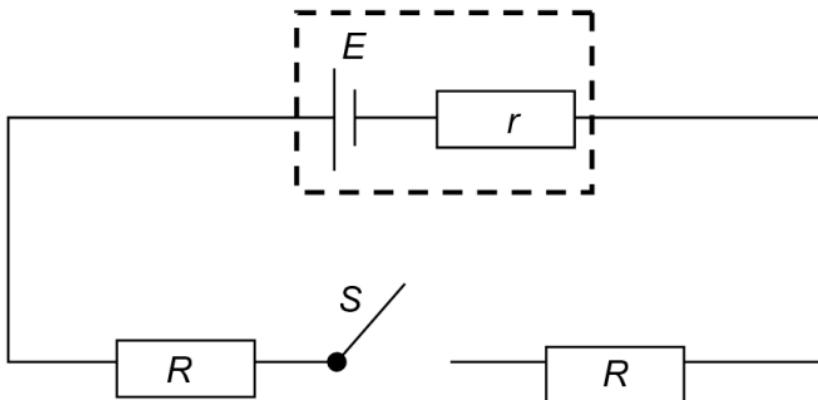


- 20 A battery, with an e.m.f  $E$  and internal resistance  $r$ , is connected to a switch  $S$  and two identical resistors in series. Each resistor has resistance  $R$ .



Which one of the following statements is correct when the switch  $S$  is closed?

When an ideal voltmeter is connected

- A across one resistor, the voltmeter's reading is  $0.5 E$ .
- B across two resistors, the voltmeter's reading is  $E$ .
- C across the battery, the voltmeter's reading is  $E$ .
- D across the battery, the voltmeter's reading is less than  $E$ .