Physics 11 M. Lam

Terminal Voltage and More

Block:

1. Determine the terminal voltage of the battery.



2. Determine the emf of the cell.



3. A battery with an internal resistance is connected to three resistors as shown.



- a) Determine internal resistance.
- b) What power is dissipated in the battery's internal resistance?

4. Determine the internal resistance of the battery.



5. An ideal battery is connected to four resisters as shown.



- a) How much charge flows through R₄ in 1 hour?
- b) What power is dissipated by R_4 ?
- c) How much energy is dissipated by R₄ in 1 hour?
- 6. When a power supply whose emf is 12.0 V is connect to a resistor, it delivers 9.0 A of current. When the same supply is connected to two identical resistors in series, the current from the supply is 5.0 A. Determine the internal resistance of the supply.

