Sources of EMF IN DC

READ/STUDY Sections 26-1 and 26-4 in your textbook and the physical principles in the lab exercise.

Hand in the questions on the day we due the experiment. Not acceptable after.

Questions:

1. What is the misnomer "emf" really mean?

2. Define TERMINAL VOLTAGE?

3. Write the equation between the Terminal Voltage and the emf of a battery?

4. What is "r' in the equation in question 3.

5. What is the combination "Ir" in the equation in question 3 mean?

6. What is the formula for the total emf of two batteries of emfs $\mathcal{E}_1$ internal resistance $r_1$ and $\mathcal{E}_2$ internal resistance $r_2$ in series like in a flash light? Also the total internal resistance of the pair?

7. What is the advantage of putting two batteries of equal emf in parallel?

Problems: Add these to the end of your lab report. Show all formulas and math work for full credit!

P1. A resistor, R, = 50$\Omega$ is connected to a Battery of emf 16.0V and an internal resistance of r=7$\Omega$.

a) What current will be drawn from the battery?
b) What actually is the Terminal Voltage, $V_{ab}$ of the Battery

P2. The battery in P1 is connected in series to a Battery of 5.0 V, internal resistance r=2$\Omega$.

a) What is the total emf?
b) What is the total internal resistance of the series pair?