

1. A generator produces a 115-volt potential difference and a maximum of 20.0 amperes of current. Calculate the total electrical energy the generator produces operating at maximum capacity for 60. seconds. [Show all work, including the equation and substitution with units.]

Base your answers to questions 2 through 4 on the information below.

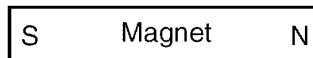
An 18-ohm resistor and a 36-ohm resistor are connected in parallel with a 24-volt battery. A single ammeter is placed in the circuit to read its total current.

2. Draw a diagram of this circuit using symbols from the *Reference Tables for Physical Setting/Physics*. [Assume the availability of any number of wires of negligible resistance.]

3. Calculate the equivalent resistance of the circuit. [Show all work, including the equation and substitution with units.]

4. Calculate the total power dissipated in the circuit. [Show all work, including the equation and substitution with units.]

5. Base your answer to the following question on On the diagram of the bar magnet, draw a minimum of four field lines to show the magnitude and direction of the magnetic field in the region surrounding the bar magnet.



Part 2 Review L

6. An electron is accelerated through a potential difference of 2.5×10^4 volts in the cathode ray tube of a computer monitor. Calculate the work, in joules, done on the electron. [Show all work, including the equation and substitution with units.]