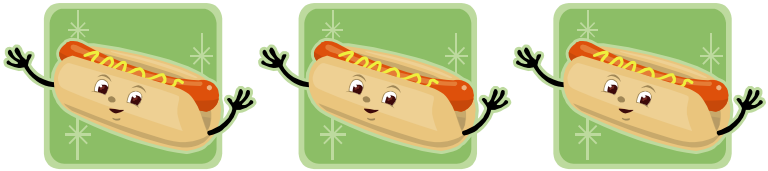
Name_____ _____ Hour _____



The Hot Dog Lab!

10 points, DUE by the end of the hour-Each person completes the lab, then staple them together.

Put all of your answers in CENTS so they are easier to compare please.

<u>Method 1</u> – Using a hot plate

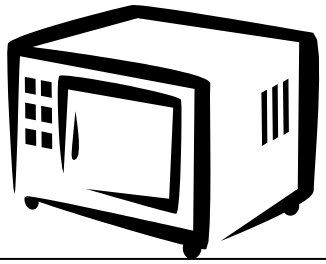
1. Boil your hot dog and time how long it takes to cook. Δt =___5 min___
   (Use your best judgment for when it is "done.")

2. The power on the hotplate is __1200_____ Watts
3. Solve for how much it cost to cook your hot dog using this method and the wattage on the hot plate. (Solve for work and x $.101) It will be small!

Cost using a hot plate = _____ cents

<u>Method 2</u> – Microwave

1. Microwave your hot dog. Use your best judgment for when it is "done."
2. Note how long it took to cook: Δt =___30___ sec.
3. The power on the microwave is ____1450_____ Watts
4. Calculate the cost to cook your hot dog using this method and the wattage from the microwave.

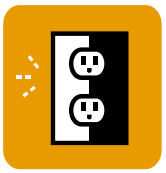


Cost using a microwave = _____ cents

Name_____ _____ Hour _____

<u>Method 3</u> – Plugging it into the wall DEMO! Do not try this at home!!!!!!!!

1. Use multi-meter to measure R of your hotdog: R = ___0.991 x 10^6 ohms_____
2. Plug in hot dog and time how long it takes to cook.
   Δt = __21____ sec.
3. Solve for how much it cost to cook it and show your work below. (Remember- you know ΔV and R so you can solve for P first)



Cost when plugging it into the wall = _____ cents

After the lab:

1. Which of the methods was the **most expensive** way to cook a hotdog?

2. Which of the methods was the **least expensive** way to cook a hotdog? Why don't we always cook it this way if it saves money?

3. At the gas station, the hot dog roller machine cooks hot dogs for customers all day long. If the machine is 1350 Watts, how much does it cost to run the hot dog roller for 15 hours a day for a 30 day month?