

Money Down the Drain Worksheet DIFFICULT VERSION

Names: _____ Date: _____

Instructions: Complete the information for your faucet, then meet with other groups to fill in the rest of the data. Observe the water dripping from the faucet and answer the following questions. Record your responses on the attached answer sheet.

1. **How many drops fall each minute?** Take three readings and then calculate the average. Tell your teacher if there are no longer any drops or if the drops have turned into a steady flow.

Reading 1: _____ drops/minute

Reading 2: _____ drops/minute

Reading 3: _____ drops/minute

Determine the average drops per minute

= _____ average drops per minute

2. **How much water drips into the container in a minute?** Collect one minute's worth of water and measure the volume in a graduated cylinder. Take three readings and calculate the average.

Reading 1: _____ mL

Reading 2: _____ mL

Reading 3: _____ mL

Determine the average dripped volume per minute

= _____ average mL per minute

3. What is the volume of the container collecting the faucet drips (ask your teacher if you cannot determine this)? _____ mL

Guess how much time it will take the container to fill: _____ minutes

4. Calculate the time it will take the container to fill.

= _____ minutes to fill container

5. **Time how long it takes for the container to actually fill.** _____ minutes

6. How do the answers to 3, 4, and 5 compare to each other?

7. Determine how much water was lost from this leaking faucet in one hour.

= _____ mL per hour

8. How much water would be lost in one day?

= _____ mL per day

9. How much water would be lost in one week?

= _____ mL per week

10. How much water would be lost in one month? Assume 1 month equals 4 weeks.

= _____ mL per month

11. Many people have to pay for their water. If water cost \$10* for every 5,700,000 mL (approx. 200 ft³), how much would a person pay each month for water down the drain from this leaky faucet?

_____ mL per month x (\$10 / 5,700,000 mL) = \$ _____ per month

Replace value with actual cost of water for your community if known