


Answer sheet for Jug # _____

Name: _____ Date: _____

Record answers to questions 1 and 2 below

	1. Drops per minute			2. Volume of water (ml) collected in 1 minute		
	JUG #1	JUG #2	JUG #3	JUG #1	JUG #2	JUG #3
Reading #1						
Reading #2						
Reading #3						
Total						
Average (Total ÷ 3)						

Record answers to questions 3, 4, 5, 7, 8, 9, 10, and 11 below. Write answer to question 6 below or on another page.

	JUG #1	JUG #2	JUG #3
3. estimate			
4. jug empty			
5. actual time			
7. ml/hour			
8. ml/day			
9. ml/week			
10. ml/month			
11. \$/month			





Money Down the Drain Worksheet

Name: _____ Date: _____

INSTRUCTIONS: Complete the information for your jug, then meet with other groups to fill in the rest of the data. (NOTE: for simplicity, all measurements are in the metric system.)

Observe the water dripping from the jug and answer the following questions. Record your responses on the answer sheet.

1. **How many drops fall each minute?** (Take three readings and find the average. Skip this question and the next if there is a small stream instead of drips.)

Reading 1: _____ drops Reading 3: _____ drops

Reading 2: _____ drops

Add the above readings and divide by 3 to find the average:

Reading 1 _____ drops + Reading 2 _____ drops +
Reading 3 _____ drops = _____Total drops \div 3 = _____ average drops per minute

2. **How much water drips from the jug in a minute?** (Collect one minute's worth of water and measure the volume in a graduated cylinder. Take three readings and find the average.)

Reading 1: _____ ml Reading 3: _____ ml

Reading 2: _____ ml

Add the above readings and divide by 3 to find the average:

Reading 1 _____ ml + Reading 2 _____ ml +
Reading 3 _____ ml = _____Total ml \div 3 = _____ average ml per minute

3. **Estimate how much time it will take the jug to empty:** _____

4. **Calculate the time it will take the jug to empty.** (NOTE: One gallon of water equals 3,785 ml.)

3,785 ml per gallon \div average amount of water collected in one minute = minutes for jug to empty:

3,785 ml per gallon \div _____ ml per minute =

_____ minutes for jug to empty

5. **Time how long it takes for the jug to actually empty** (optional) (NOTE: reduced pressure as water level goes down may cause some jugs not to empty completely. Do not shake or squeeze jug, stop timing after the last drop naturally falls): _____

6. **How do the answers to 3, 4, and 5 compare to each other?** Write the reasons why they are similar or different (see note in number 5 for suggestions).

7. **If this was a faucet leaking this much water, how much water would be lost in one hour?**

Average amount of water collected in one minute \times 60 minutes = ml per hour:

_____ ml per minute \times 60 minutes = _____ ml per hour

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

ml per hour \times 24 hours = ml per day:_____ ml per hour \times 24 hours = _____ ml per day

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

ml per day \times 7 days = ml per week:_____ ml per day \times 7 days = _____ ml per week

10. **How much water would be lost in one month?**

(For simplicity, assume 1 month equals exactly 4 weeks.)

ml per week \times 4 weeks = ml per month:_____ ml per week \times 4 weeks = _____ ml per month

11. **Many people have to pay for their water. If water costs \$10 for every 200 ft³* (200 ft³ equals 5,663,369 ml), and if the water dripping from the jug was a real faucet, how much would a person pay each month for this water down the drain?**

_____ ml per month \times (\$10 \div 5,663,369 ml) =

\$ _____ per month

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

