



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			



Name: _____

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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.

- 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 ÷ 3 = _____ average drops per minute

- 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 ÷ 3 = _____ average ml per minute

- Estimate how much time it will take the jug to empty:

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

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

3,785 ml per gallon ÷ _____ ml per minute =

_____ minutes for jug to empty

- 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): _____

- 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).

- 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 x 60 minutes = ml per hour:

_____ ml per minute x 60 minutes = _____ ml per hour

- How much water would be lost in one day?

ml per hour x 24 hours = ml per day:

_____ ml per hour X 24 hours = _____ ml per day

- How much water would be lost in one week?

ml per day x 7 days = ml per week:

_____ ml per day x 7 days = _____ ml per week

- How much water would be lost in one month? (For simplicity, assume 1 month equals exactly 4 weeks.)

ml per week x 4 weeks = ml per month:

_____ ml per week x 4 weeks = _____ ml per month

- Water is generally charged in California by the volume the infrastructure is being required to deliver to (being used by) the consumer. The unit of charge is usually by the cubic foot (CF) or hundred cubic foot (CCF or HCF). Calculate the cubic foot of water lost per month by each leak, then calculate the cost of the leak based on your local water rate.

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