General Chemistry
Mr. MacGillivray
Quiz #2:
Units, Prefixes, and Measurement

Circle the larger quantity in each pair.

1. 1 kg or 1 g
2. 1 ml or 1 liter
3. 1m or 1 cm
4. 1 mm or 1 cm
5. 1 dm^3 or 1 dL

Match each unit with the proper quantity by writing the appropriate letters in the blanks.

6. _____Heat
7. _____Temperature
8. _____Volume
9. _____Mass
10. _____Length
11. _____Weight
12. _____Density

a. g/ml
b. Kelvin or ^oC
c. meter
d. newton
e. liter
f. J or cal
g. kg

Indicate how many significant figures there are in each measurement.

13. _____0.034 m
14. _____34.00 m
15. _____34.0 m
16. _____34.0×10^6 m
17. _____0.03400 m
18. _____340 m

Solve each problem and report the answer to the correct number of sig figs.

19. 7.00 m x 6.00 m = _____m^2
20. 7.00 m + 6.00 m = _____ m

***** (Continued on next page.) *****

Examine the following data collected for the determination of the density of an unknown substance. The accepted value is 4.50 g/cm^3.

Table 1. Density in g/mL

	Group 1	Group 2	Group 3
	4.50	4.00	2.00
	4.50	4.02	7.00
	4.49	4.03	4.00
	4.51	4.03	3.00
AVG	**4.50**	**4.02**	**4.00**

Briefly discuss (one sentence) the accuracy and precision of each group.

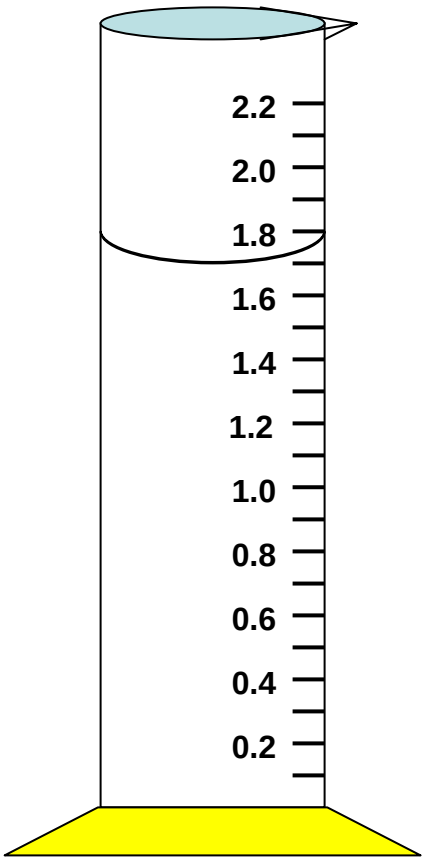
21. Group 1

22. Group 2

23. Group 3

24. Report the volume of the liquid in the graduated cylinder at right. Use the correct number of significant figures in your answer.

Answer = _____ml



(Answers)

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Circle the larger quantity in each pair.

1. (1 kg) or 1 g

2. 1 ml or (1 liter)

3. (1m) or 1 cm

4. 1 mm or (1 cm)

5. (1 dm^3) or 1 dL

Note: a dm^3 *is* a liter, but a dL is one tenth of a liter

Match each unit with the proper quantity by writing the appropriate letters in the blanks.

6. ____f_____Heat
7. _____b_____Temperature
8. ____e_____Volume
9. ____g_____Mass
10. _____c____Length
11. _____d____Weight
12. _____a_____Density

a. g/ml
b. Kelvin or ^oC
c. meter
d. newton
e. liter
f. J or cal
g. kg

Indicate how many significant figures there are in each measurement.

13. 2 0.034 m
14. 4 34.00 m
15. 3 34.0 m
16. 3 34.0×10^6 m
17. 4 0.03400 m
18. 2 340 m

Solve each problem and report the answer to the correct number of sig figs.

19. 7.00 m x 6.00 m = 42.0 m^2

20. 7.00 m + 6.00 m = 13.00 m

***** (Continued on next page.) *****

Examine the following data collected for the determination of the density of an unknown substance. The accepted value is 4.50 g/cm^3.

Table 1. Density in g/mL

	Group 1	Group 2	Group 3
	4.50	4.00	2.00
	4.50	4.02	7.00
	4.49	4.03	4.00
	4.51	4.03	3.00
AVG	**4.50**	**4.02**	**4.00**

Briefly discuss (one sentence) the accuracy and precision of each group.

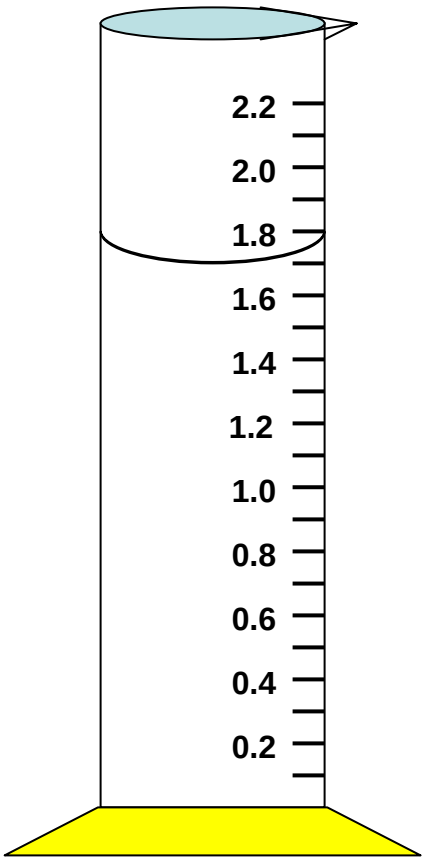
21. Group 1 - The accuracy is good and the precision is good.

22. Group 2 - The accuracy is not very good and the precision is good.

23. Group 3 - The accuracy is not very good and the precision is bad.

24. Report the volume of the liquid in the graduated cylinder at right. Use the correct number of significant figures in your answer.

Answer = 1.70 ml

(*or* 1.71 ml *or* 1.69 ml)

Note: "1.7 ml" is incorrect due to incorrect # of significant figures.
Always record the volume to one more decimal place than what is shown on the instrument.