

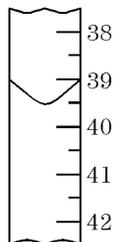
Unit 1 Remediation Assignment

Name: _____

Date: _____

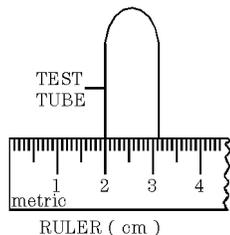
1. The diagram shown represents a portion of a buret. What is the reading of the meniscus?

- A. 39.2 mL B. 39.5 mL
C. 40.7 mL D. 40.9 mL



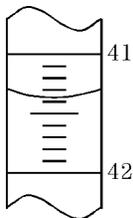
2. A student has to measure the diameter of a test tube in order to calculate the tube's volume. Based on the diagram shown, the tube's diameter is closest to

- A. 1.25 cm
B. 2.32 cm
C. 3.25 cm
D. 12.5 cm



3. Which is the correct reading of the meniscus as shown in the portion of the buret in the diagram?

- A. 41.30 mL B. 41.35 mL
C. 42.60 mL D. 42.65 mL



4. Which measurement contains a total of three significant figures?

- A. 0.01 g B. 0.010 g
C. 0.0100 g D. 0.01000 g

5. The following weighings were made during a laboratory exercise:

Mass of evaporating dish 59.260 g
Mass of sugar sample 1.61 g

What is the total mass of the evaporating dish plus the sample, expressed to the proper number of significant figures?

- A. 60.870 g B. 60.87 g
C. 60.9 g D. 61 g

6. Which milligram quantity contains a total of four significant figures?

- A. 0.3010 mg B. 3010 mg
C. 3100 mg D. 30001 mg

7. In a laboratory exercise to determine the density of a substance, a student found the mass of the substance to be 6.00 grams and the volume to be 2.0 milliliters. Expressed to the correct number of significant figures, the density of the substance is

- A. 3.000 g/mL B. 3.00 g/mL
C. 3.0 g/mL D. 3 g/mL

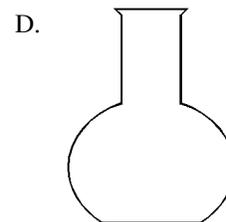
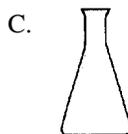
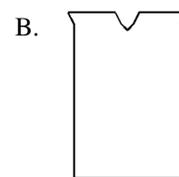
8. Which measurement has the greatest number of significant figures?

- A. 6.060 mg B. 60.6 mg
C. 606 mg D. 60600 mg

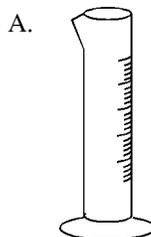
9. Given: $(52.6 \text{ cm})(1.214 \text{ cm})$. What is the product expressed to the correct number of significant figures?

- A. 64 cm^2 B. 63.9 cm^2
C. 63.86 cm^2 D. 63.8564 cm^2

10. Which diagram shown represents an Erlenmeyer flask?

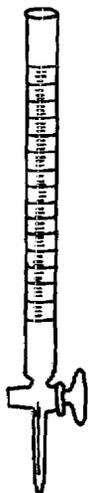


11. Which diagram represents a graduated cylinder?

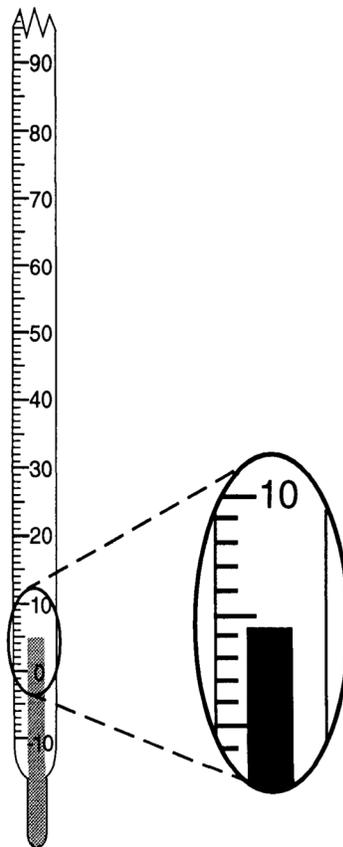


12. What is the name of the laboratory apparatus shown in the diagram here?

- A. buret
- B. pipet
- C. graduated cylinder
- D. funnel tube



13. The accompanying diagram represents a Celsius thermometer recording a certain temperature.



What is the correct reading of the thermometer?

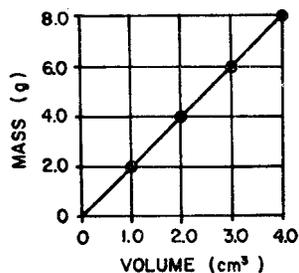
- A. 5°C
- B. 4.3°C
- C. 0.3°C
- D. 4°C

14. The length of a string is 85 centimeters. Expressed in meters, this length is

- A. 0.085 m
- B. 0.85 m
- C. 8.5 m
- D. 85 m

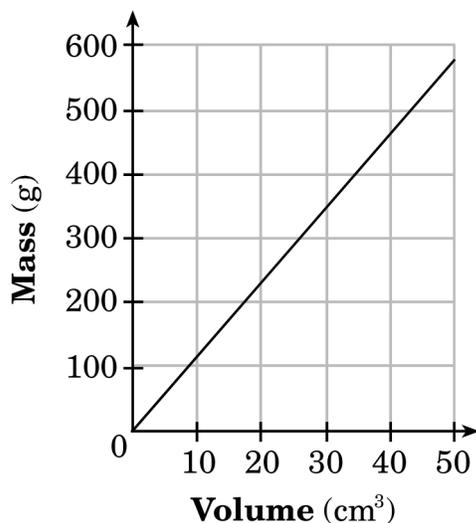
15. The masses and volumes of four samples of a material were determined by a laboratory experiment. The graph shown indicates the results obtained. The density of the material is

- A. 8.0 g/cm^3
- B. 2.0 g/cm^3
- C. 18 g/cm^3
- D. 32 g/cm^3



16. A chemistry student is given 5 samples of a metal. The student measures and records the mass and the volume of each sample and then graphs the data, as shown below.

Mass vs. Volume of a Metal



What is the identity of the metal?

- A. aluminum
- B. iron
- C. nickel
- D. lead

17. Which quantity of heat is equal to 200. joules?

- A. 20.0 kJ
- B. 2.00 kJ
- C. 0.200 kJ
- D. 0.0200 kJ

18. Read the conversion shown below.

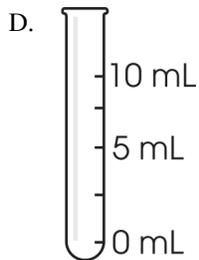
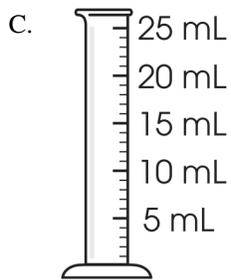
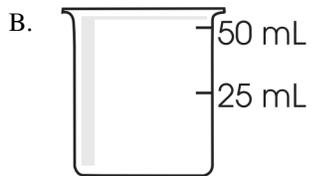
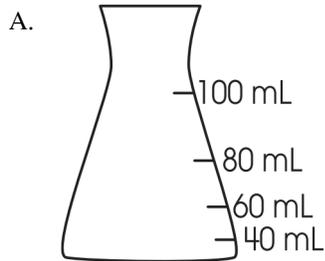
1 millimeter (mm) = 1000 micrometers (μm)

A cell measures 5 micrometers in diameter. Which of these is the diameter in millimeters?

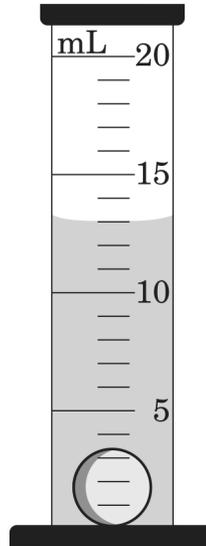
- A. $5 \times 10^{-3} \text{ mm}$
- B. $5 \times 10^3 \text{ mm}$
- C. $5 \times 10^{-6} \text{ mm}$
- D. $5 \times 10^6 \text{ mm}$

19. A student studying rock densities needs to measure the volume of a small rock sample to the nearest milliliter (mL). The student knows that the rock sample has a volume of at least 5 mL.

Which tool should the student use to get the most accurate measure of the volume of water displaced by the rock?



20. This diagram shows a marble with a mass of 3.8 g that was placed into 10 mL of water.



What is the density of the marble?

- A. 0.79 g/cm^3 B. 0.95 g/cm^3
C. 1.05 g/cm^3 D. 1.27 g/cm^3

1.
Answer: B
2.
Answer: A
3.
Answer: B
4.
Answer: C
5.
Answer: B
6.
Answer: A
7.
Answer: C
8.
Answer: A
9.
Answer: B
10.
Answer: C
11.
Answer: A
12.
Answer: A
13.
Answer: B
14.
Answer: B
15.
Answer: B
16.
Answer: D
17.
Answer: C
18.
Answer: A
19.
Answer: C
20.
Answer: D