

Homework 1**Multiple Choice**

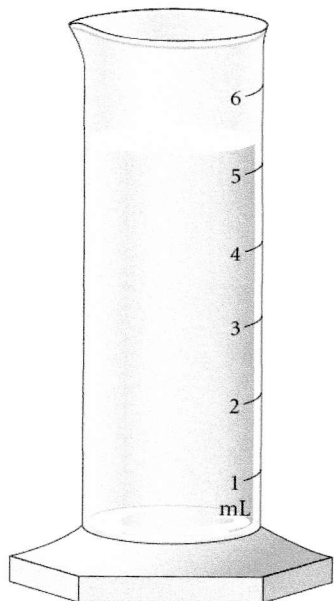
Identify the choice that best completes the statement or answers the question. Please show all work and or tell why your answer is correct.

- _____ 1. Identify the exact number.
- 2
 - 2.0
 - 2.00
 - 2.000
 - 2.0000
- _____ 2. Identify the unit of measurement which is a SI base unit of measurement.
- meter
 - Celsius
 - quart
 - gram
 - kilometer
- _____ 3. Kelvin is a measure of
- temperature.
 - mass.
 - time.
 - length.
 - volume.
- _____ 4. The factor 0.01 corresponds to which prefix?
- deka
 - deci
 - centi
 - milli
- _____ 5. Identify the boiling point of water.
- 373 Kelvin
 - 32 degrees Fahrenheit
 - 459 degrees Fahrenheit
 - None of the above
- _____ 6. Determine the density of an object that has a mass of 149.8 g and displaces 12.1 mL of water when placed in a graduated cylinder.
- 8.08 g/mL
 - 1.38 g/mL
 - 12.4 g/mL
 - 18.1 g/mL
 - 11.4 g/mL

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___ 7. Read the water level with the correct number of significant figures.



- a. 5 mL
- b. 5.3 mL
- c. 5.32 mL
- d. 5.320 mL
- e. 5.3200 mL

___ 8. What answer should be reported, with the correct number of significant figures, for the following calculation? $(433.621 - 333.9) \times 11.900$

- a. 1.19×10^3
- b. 1.187×10^3
- c. 1.1868×10^3
- d. 1.18680×10^3
- e. 1.186799×10^3

___ 9. What answer should be reported, with the correct number of significant figures, for the following calculation? $(965.43 \times 3.911) + 9413.4136$

- a. 13189
- b. 13189.2
- c. 1.32×10^4
- d. 1.3×10^4
- e. 1.319×10^4

- _____ 10. Identify the **largest** measurement.
- attoL
 - microL
 - deciL
 - gigaL
 - petaL
- _____ 11. What is the volume (in cm^3) of a 43.6 g piece of metal with a density of 2.71 g/cm^3 ?
- 16.1
 - 19.5
 - 0.425
 - 6.65
 - none of the above
- _____ 12. A piece of metal ore weighs 9.00 g. When a student places it into a graduated cylinder containing water, the liquid level rises from 21.25 mL to 26.47 mL. What is the density of the ore?
- 0.340 g/mL
 - 0.580 g/mL
 - 1.72 g/mL
 - 2.94 g/mL
- _____ 13. If a solution has a temperature of 255 K, what is its temperature in degrees Celsius?
- 491°C
 - 528°C
 - 123.9°C
 - 355°C
 - -18°C
- _____ 14. The outside air temperature is 40°F , what is the temperature in Kelvin?
- 313 K
 - 377 K
 - 281 K
 - 277 K
- _____ 15. How many significant figures are in 0.00226500 mL?
- 3
 - 4
 - 5
 - 6
 - 7

_____ 16. How many significant figures are in 4.930×10^4 m?

- a. 2
- b. 4
- c. 3
- d. 1
- e. 5

_____ 17. The correct answer (reported to the proper number of significant figures) to the following is:

$$12.5 \times 9.68 = \underline{\hspace{2cm}}$$

- a. 121
- b. 121.0000
- c. 121.000
- d. 121.00
- e. 121.0

_____ 18. Round the following number to four significant figures and express the result in standard exponential notation: 442,722

- a. 0.4427×10^6
- b. 442,700
- c. 4.427×10^{-5}
- d. 4.427×10^5
- e. 44.27×10^4

_____ 19. How many of the following numbers contain 3 significant figures?

$$0.509 \quad 9.040 \quad 0.0300 \quad 7.03 \times 10^{24}$$

- a. one
- b. two
- c. three
- d. four

_____ 20. Round off 00507506 to four significant figures.

- a. 0051
- b. 5076
- c. 5100
- d. 5.075×10^5

_____ 21. Convert $3.3 \mu\text{m}$ to meters.

- a. 3.3×10^{-9} m
- b. 3.3×10^{-6} m
- c. 3.3×10^{-3} m
- d. 3.3×10^6 m

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- _____ 22. Convert 90 cm^3 to m^3 .
- a. $9 \times 10^{-5} \text{ m}^3$
 - b. $9 \times 10^{-1} \text{ m}^3$
 - c. $9 \times 10^3 \text{ m}^3$
 - d. $9 \times 10^7 \text{ m}^3$
- _____ 23. A person is 64.00 inches tall. How tall is she in cm?
- a. 162.6 cm
 - b. 25.20 cm
 - c. 25.60 cm
 - d. 204.0 cm
 - e. 136.0 cm
- _____ 24. An alligator is 213.4 cm long. How long is he in feet?
- a. 7.000 ft.
 - b. 84.00 ft.
 - c. 17.80 ft.
 - d. 45.20 ft.
 - e. 1009 ft.
- _____ 25. If the walls in a room are 955 square feet in area, and a gallon of paint covers 15 square yards, how many gallons of paint are needed for the room? (3 ft = 1 yd)
- a. 47 gallons
 - b. 21 gallons
 - c. 7.1 gallons
 - d. 24 gallons
 - e. 2.3 gallons