

Name: _____

Group: _____

Date: _____

GP1 Practice Test

1. Which of the following is the best definition of mass?
 - a. The amount of stuff
 - b. The amount of space
 - c. The weight of something
 - d. Anything that is made of subatomic particles

2. Which of the following is the best definition of volume?
 - a. The amount of stuff
 - b. The amount of space
 - c. The weight of something
 - d. Anything that is made of atomic particles

3. What piece of equipment would be best at moving a powder to and from a balance so that the mass of the powder can be determined?
 - a. Weigh boat
 - b. Erlenmeyer flask
 - c. Test tube
 - d. Hot plate

4. When determining the volume of a liquid or solid, what is the most accurate piece of equipment that we have used?
 - a. Beaker
 - b. Graduated cylinder
 - c. Test tube
 - d. Erlenmeyer flask

5. Which of the following is a unit of volume in the metric system?
 - a. Gram
 - b. Pint
 - c. Gallon
 - d. Milliliter

6. Which of the following is a unit of mass in the metric system?
 - a. Liter
 - b. Pound
 - c. Newton

- d. Kilogram
7. Which of the following is the appropriate way to dispose of chemicals after a lab?
- a. Follow the procedures detailed by the teacher
 - b. Dilute chemicals with water then dump them outside of the school
 - c. Pour all chemicals down the sink.
 - d. Leave chemicals at work stations after class
8. Which of the following should be yelled out if someone is injured in a chemistry classroom or science lab?
- a. "Man down!"
 - b. "Code one!"
 - c. "Number one!"
 - d. "Mommy!"
9. In the case of a fire drill during lab, which of the following is **NOT** a necessary task?
- a. Gas valves should be turned off
 - b. Electrical equipment should be turned off
 - c. Fume hood should be turned off.
 - d. Students should gather lab equipment and take it outside.
10. Which of the following is a ratio of mass to volume?
- a. Gravity
 - b. Space
 - c. Density
 - d. Plasma
11. Which of the following explains how a steel battleship can float on water?
- a. The mass of the ocean is greater than the mass of a battleship.
 - b. The average density of the battleship is less than the density of water.
 - c. The volume of the battleship is smaller than the volume of the ocean.
 - d. The battleship needs to float to support fighter planes and service men/women.
12. A graduated cylinder contains ten milliliters of water. Five milliliters of water are added. Which of the following quantities have **NOT** changed for the water in the graduated cylinder?
- a. Volume
 - b. The height of the water in the graduated cylinder
 - c. Mass
 - d. Density
13. What does the tare button do on a digital balance?
- a. It changes the balance from reading grams to reading ounces
 - b. It adds 10 grams to the mass value

- c. It zeroes the balance with an empty container on it
- d. It reduces the size of a piece of paper

14. An object has a mass of 15 g and a density of 5 g/mL. What is its volume?

- a. 20 mL
- b. 3 mL
- c. 5 mL
- d. 10 mL

15. A graduated cylinder contains 20.0 mL of water before a piece of aluminum is placed into it and sinks. After the aluminum sinks, the water level is recorded to be 23.6 mL. What is the volume of this piece of aluminum?

- a. 45.6 mL
- b. 472. mL
- c. 1.16 mL
- d. 3.6 mL

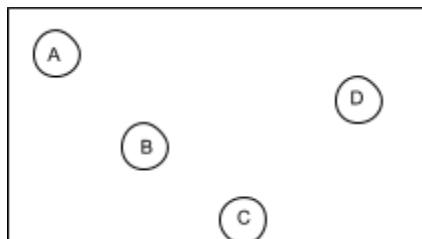
16. Which of the following represents an **INCORRECT** expression of the ratio 3.7 g/mL? (In other words, which one is wrong?)

- a. $\frac{3.7 \text{ mL}}{1 \text{ g}}$
- b. 3.7 g = 1 mL
- c. $\frac{3.7 \text{ g}}{1 \text{ mL}}$
- d. $\frac{1 \text{ mL}}{3.7 \text{ g}}$

17. A dekaliter (daL) is how many liters (L)?

- a. $1 \times 10^1 \text{ L}$
- b. $1 \times 10^3 \text{ L}$
- c. $1 \times 10^{-3} \text{ L}$
- d. $1 \times 10^2 \text{ L}$

18. Which of the following circular objects in a fish tank filled with water is most dense?



19. Which of the following liquids is most dense?

- a. 1.5 g/mL
- b. 1.0 g/mL
- c. 1.25 g/mL
- d. 1.15 g/mL

20. Which of the following is larger than a gram?

- a. Decigram
- b. Milligram
- c. Centigram
- d. Kilogram

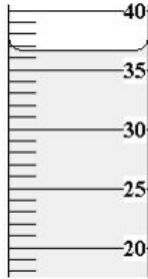
21. A centiliter is how many liters?

- a. 1×10^2 L
- b. 1×10^3 L
- c. 1×10^{-3} L
- d. 1×10^{-2} L

22. What piece of equipment would be best at putting a small amount of liquid into a container with a small opening.

- a. A beaker
- b. A pipet
- c. An Erlenmeyer flask
- d. A graduated cylinder

23. Which of the following is the best reading of this graduated cylinder?



- a. 37 mL
- b. 36.59573 mL
- c. 3.66 mL
- d. 36.6 mL

24. Which of the following is the best reading of this graduated cylinder?



- a. 9.5 mL
- b. 5.46 mL
- c. 5.5 mL
- d. 5.46327 mL

25. An object has a mass of 12 grams and a volume of 3 mL. What is its density?

- a. 4 g/mL
- b. 3 g/mL
- c. 6 g/mL
- d. 36 g/mL

26. An object has a mass of 27 grams and density of 3 g/mL. What is its volume?

- a. 9 mL
- b. 24 mL
- c. 30 mL

d. 81 mL

27. A beaker contains water with a mass of 25.00 g and a volume of 25.0 mL. What is the density of water?

- a. 50 g/mL
- b. 0 g/mL
- c. 1.0 g/mL
- d. 25 g/mL

28. Why is it important to keep aisles clear of bags, books and other materials during lab activities?

- a. Clear aisles make it easier to run around the classroom.
- b. Clear aisles are a school policy.
- c. Clear aisles make it easy to push desks, tables, and chairs around the room.
- d. Clear aisles make it easier to safely move around the room without damaging lab equipment.

29. Which of the following correctly lists metric units of length from shortest to longest?

- a. Millimeter, centimeter, dekameter, kilometer
- b. Decimeter, centimeter, dekameter, hectometer
- c. Decimeter, millimeter, hectometer, kilometer
- d. Centimeter, dekameter, kilometer, hectometer

2 horses (Ho) = 3 cows (Co)	2 dogs (Do) = 1 pig (Pi)
2 cows (Co) = 5 sheep (Sh)	2 dogs (Do) = 3 cats (Ca)
3 pigs (Pi) = 4 sheep (Sh)	6 rabbits (Ra) = 2 cats (Ca)

30. Using the Trading Post above, how many sheep can be obtained by trading in 4 horses.

- a. 7 sheep
- b. 15 sheep
- c. 13 sheep
- d. 21 sheep

31. Using the Trading Post above, how many cats are required to obtain 2 pigs?
- 4 cats
 - 5 cats
 - 6 cats
 - 9 cats
32. Calculate the densities of the following substances then determine which is most dense?
- 6 grams (g), 3 milliliters (mL)
 - 9 milliliters (mL), 27 grams (g)
 - 360 grams (g), 300 milliliters (mL)
 - 20 milliliters (mL), 40 grams (g)
33. A metal has a volume of 24 mL and a mass of 214 grams. Identify the metal.
- Silver (10.5 g/cm^3)
 - Gold (19.3 g/cm^3)
 - Zinc (7.13 g/cm^3)
 - Cobalt (8.9 g/cm^3)
34. A 27 gram piece of aluminum with a density of 2.7 g/cm^3 is placed in a graduated cylinder. **Before** the aluminum is placed in the graduated cylinder there is 34 mL of water. What will the volume be **after** the aluminum is placed in the the graduated cylinder?
- 7 mL
 - 304 mL
 - 61 mL
 - 44 mL
35. At 530.0 carats, the Cullinan I is the largest diamond in the world. If one carat of diamond is 0.200 g (1 carat = 0.200 g) and the density is 3.50 g/cm^3 , what is the volume of the Cullinan I diamond in cm^3 ?
- 9, 275 cm^3
 - 371 cm^3
 - 30.3 cm^3
 - 106 cm^3