

Mass, Volume, Density TEST

PRACTICE

1. The table below lists the densities of several materials. Which material will float in water?

- A. Pyrite
- B. Galena
- C. Plastic
- D. Sulfur

MATERIAL	DENSITY (g/mL)
Plastic	0.90
Pyrite	5.00
Sulfur	2.07
Water	1.00
Galena	7.50

2. Which of the following best compares a sample of the mineral hornblende that has a mass of 45 grams and 45 grams worth of cotton balls?

- A. They have equal masses and equal densities.
- B. They have equal masses, but the mineral has a higher density.
- C. The mineral has a higher mass and higher density.
- D. They have equal masses, but the cotton balls have a higher density

3. What two quantities do you need to know in order to determine the density of an object?

- A. Mass and Weight
- B. Weight and grams
- C. Mass and Volume
- D. Volume and Centimeters

4. According to the information in the table, what comparison can the scientist make about the densities of sugar and corn starch?

PROCEDURE	SALT	SUGAR	CORN STARCH
MEASURE MASS	14g	12g	5g
MEASURE VOLUME	10mL	10mL	10mL

- A. Sugar and corn starch have the same density.
- B. Corn starch is more dense than sugar.
- C. Sugar is more dense than corn starch.
- D. Both sugar and cornstarch are more dense than salt.

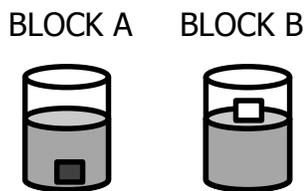
5. Compare the density of an aluminum cube and a plastic cube. The mass of the aluminum cube is 21 grams and the mass of the plastic cube is 2 grams. The volume is the same for both cubes.

- A. The density is the same for both.
- B. The density of both is less than the density of water.
- C. The density of the aluminum cube is greater than the density of the plastic cube.
- D. The density of the aluminum cube is less than the density of the plastic cube.

6. Two students are measuring and calculating the density of a piece of crayon. The crayon accidentally gets dropped and is now in two pieces. Student A found the density before the crayon was dropped and Student B found the density after the crayon was dropped. How will the density of the crayon found by Student A compare to the density found by Student B?
- A. The density cannot be found for student B.
 - B. The density will be the same.
 - C. Student B will have a greater density.
 - D. Student A will have a greater density.

WRITTEN RESPONSE

7. Block A and Block B are made of different materials. Each block is in a container with hydrogen peroxide, as shown below. Why does Block A sink and Block B float? The density of hydrogen peroxide is 1.11 g/mL.



8. Suppose that you have two specimens of the mineral azurite. Specimen A has a mass of 10 grams and specimen B has a mass of 75 grams. What do you know about the density for each specimen of azurite?

Answers:

1.C 2.B 3.C 4.C 5.C 6.B

7. Block A sinks because it has a density greater than 1.11 g/mL. Block B floats because it has a density less than 1.11 g/mL.
8. The density will remain the same for the mineral azurite, regardless of the size of its mass.