RESEARCH QUESTION

INTRODUCTION

Density is defined mathematically as the ratio of a substances mass and volume:

$$p = mass/volume$$

It uses derived units; in chemistry, the derived units are usually g/mL or g/cm cubed. The latter is equivalent to the former because 1mL = 1 cm cubed.

PROCEDURES

First, we measured the mass of the gray plastic PVC sample using an electronic scale. We filled our graduated cylinder with 50 mL of water and then slid the sample into the cylinder. We then measured the new volume of the water, being careful each time to measure at the meniscus. Next, we subtracted these two volumes to obtain the sample's volume. The sample's mass was divided by its volume to obtain density. Each lab group then announced their findings and a comparison of these was made.

DATA/OBSERVATIONS

-The mass of my PVC was 19.10g
-The volume of water in the cylinder was 50mL
-The new volume of water after sliding in the PVC was 64mL
-64mL – 50mL = **14mL**
-19.10g ÷ 14mL = **1.4 g/mL**

CONCLUSION

The units of density are determined by the units used for mass and volume and then dividing those units wit their respective quantities. These are derived units, renowned by computation. Density is a physical trait that determines if an object will sink or float in a liquid. If the object's density is less than the liquid's density, it floats. The PVC had a greater density than the water, and therefore it sank.