

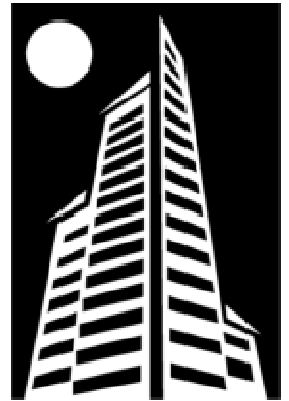
Name _____

Date _____

Using Density in Real-life Situations - Independent Practice Worksheet

Complete all the problems. Make sure to draw pictures to help you solve the problems.

1) Julia runs a hotel. She wants to hold a party in the banquet hall of her hotel. The hall has a size of 70,000 square feet. She found the population density to 0.004 people per square foot. This included all people in the banquet hall. How many total people can attend the party in banquet hall?



2) John runs a small Courier Company. He fixed the average size of parcel, that parcel size should not be more than 25 kg and a volume of $17,000 \text{ cm}^3$.

Monty wants to send a parcel to his friend. The density of his parcel is 0.002 kg/cm^3 , the height is 25 cm, the width is 18 cm, and the length is 30 cm. You have to calculate the mass of the parcel and does this parcel qualify the average size of Courier Company?

3) Mary purchased a new drawing box. The height, width and length box are respectively 12 cm, 6 cm, 3 cm. She wants to fill the box with pencils. The density of a pencil is $0.03 \text{ pencils per cm}^3$?
How many total pencils can she fit in the drawing box?

4) Dean wants to buy a light weight gold ring to give to her friend. She has two options of rings, but she doesn't know that which one is lighter. The volume and density of first ring is respectively 1.15 ml, 20.23 g/ml. The volume and density of second ring is respectively 1.18 ml, 19.3 g/ml. Her friend wants a very light ring. Which ring is lighter?

5) Eric has a trolley. He wants to use that trolley to transport wooden blocks. The size of trolley is 3,960,000 square centimeter. He found the wooden blocks to have a density of 0.0029 blocks per square centimeter. How many total wooden blocks can he carry in the trolley?

6) Frank purchased a new ice box having 2kg capacity. He wants it to be full with ice cubes. He measured the ice cubes to be 3.5 cm by 3.5 cm by 3.5 cm and have a density of 0.914 g/ml. How many cubes can he put in the box?



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7) Henry is a carpenter. He received an order to make an attractive and light weight metal frame door.

He has two options: one is an iron frame door. The second is an aluminum frame door.

The volume and density of iron frame is respectively 1350 ml, 7.87 g/ml.

The volume and density of aluminum frame is respectively 2850 grams, 2.7 g/ml.

The customer wants the lightest door frame possible. Which one is the right option for the door?

8) Hunter runs a general store. He gets a new cup to fill the 2 kg bag of sugar. The volume and density of the cup of sugar is respectively 250 ml, 1.60 g/ml. How many cups will it take to fill the bag?

9) Murray makes a dish for his child. The recipe of the dish calls for 230 grams of flour. According to a text book, the density of flour is 0.621 g/ml. How many mls of flour are needed for this recipe?

10) Norris threw a plastic toy in the tub for her dog. But there is a problem; the puppy does not like putting his face in water.

If the weight of toy is more than 350 grams it will sink.

The density and volume of toy is respectively 0.453 g/ml, 673.45 ml.

Will the toy sink or float?

