

1. A Hershey's bar weighs 7.00 oz. How many grams does the Hershey's bar weight. Note, 1 oz = 28.35 g.

$$m = 7.00 \text{ oz} \times \frac{28.35 \text{ g}}{1 \text{ oz}}$$

$$m = 198.45 \text{ g}$$

$$m = 198 \text{ g}$$

2. A cake recipe calls for 2 tablespoons of vanilla. However, you do not have a tablespoon in your kitchen! You instead have a teaspoon. How many teaspoons of vanilla must you add to the mix? Note, 1 T = 3 t.

$$V = 2 \text{ T} \times \frac{3 \text{ t}}{1 \text{ T}}$$

$$V = 6 \text{ t}$$

3. A standard bottle of wine is 750.0 mL. How many fluid ounces does the bottle hold? Note, 1 L = 33.8 fl oz.

$$V = 750.0 \times 10^{-3} \text{ L} \times \frac{33.8 \text{ fl oz}}{1 \text{ L}}$$

$$V = 25.35 \text{ fl oz}$$

4. A brownie recipe calls for 2.0 teaspoons of vegetable oil. You are cooking for a family party and scale up the recipe by a factor of 18. Note, 1 T = 3 t and 1 C = 16 T.

(a) How many teaspoons of vegetable oil are required?

(b) To more efficiently measure the vegetable oil for the scaled-up recipe, you decide to measure using cups. How many cups of vegetable oil are required for the scaled-up recipe.

(a)

$$N = 18(2 \text{ t})$$

$$N = 36 \text{ t}$$

(b)

$$V = 36 \text{ t} \times \frac{1 \text{ T}}{3 \text{ t}} \times \frac{1 \text{ C}}{16 \text{ T}}$$

$$V = 0.75 \text{ C}$$

5. A bottle of SRJC Shone Farm olive oil is very popular and has only 6 fl oz remaining. A serving for a balsamic bread dip calls for 5 T of olive oil. How many complete servings can you prepare? Note, 1 fl oz = 2 T.

$$V = 6 \text{ fl oz} \times \frac{2 \text{ T}}{1 \text{ fl oz}} \times \frac{1 \text{ serving}}{5 \text{ T}}$$

$$V = 2.4 \text{ servings}$$

$$V = 2 \text{ servings}$$

6. A recipe calls for 525 mL of red wine. How many cups would you need to use? Note, 2 T = 29.59 mL and 1 C = 16 T.

$$V = 525 \text{ mL} \times \frac{2\text{T}}{29.59 \text{ mL}} \times \frac{1\text{C}}{16 \text{ T}}$$

$$V = 2.2178 \text{ C}$$

$$V = 2.22 \text{ C}$$

7. A recipe for bread dough yields 7.5 kg of dough. If you divide the dough into 275-g loaves, how many loaves will you be able to make from the recipe?

$$N = 7.5 \times 10^3 \text{ g} \times \frac{1 \text{ loaf}}{275 \text{ g}}$$

$$N = 27 \text{ loaves}$$

8. 1 cup of water weighs 8.0 oz and 1 cup of chili powder weigh 3.7 oz. Is water of chili powder more dense? Use math to support your answer.

First we need to calculate the density of water!!

$$\rho_{\text{Water}} = \frac{8.0 \text{ oz}}{1 \text{ C}}$$

$$\rho_{\text{Water}} = 8.0 \text{ oz/C}$$

Next, we need to calculate the density of chili powder!!

$$\rho_{\text{Chili Powder}} = \frac{3.7 \text{ oz}}{1 \text{ C}}$$

$$\rho_{\text{Chili Powder}} = 3.7 \text{ oz/C}$$

9. You have 4 sticks of butter. How many pounds of butter do you have? Note, 1 cup of butter = 2 stick of butter and 1 pound of butter = 2 cups of butter.

$$4 \text{ sticks} \times \frac{1 \text{ C butter}}{2 \text{ sticks}} \times \frac{1 \text{ lb}}{2 \text{ C butter}} = 1 \text{ lb}$$

10. A jar of honey is 1 C in volume. Given that 1 C of honey weighs 12 oz, how many grams does a jar of honey weigh? Note, 1 oz = 28.35 g.

$$m = 1 \text{ honey jar} \times \frac{1 \text{ C honey}}{1 \text{ honey jar}} \times \frac{12 \text{ oz}}{1 \text{ C honey}} \times \frac{28.35 \text{ g}}{1 \text{ oz}}$$

$$m = 340.2 \text{ g}$$

$$m = 340 \text{ g}$$