Larkin University
College of Pharmacy

Pharmaceutical Calculations Self-Assessment

Instructions: Please see all your work and **CIRCLE** your final answer.

1. Choose the fraction with the highest value. $\frac{2}{3}$ $\frac{4}{4}$ $\frac{6}{5}$ $\frac{3}{5}$

2. Convert 395 milligrams to grams.

3. Which of the following units represents the largest volume? Circle your choice.
   a. milliliter
   b. microliter
   c. deciliter

4. Express 0.76 as a percentage.

5. Express $\frac{1.24}{4.96}$ as a percentage.

6. Express $\frac{1}{3}$ of $\frac{1}{2}$ as a percentage.

7. $\frac{(5.25\ X 6.75\ X\ 9)}{(6.75\ X\ 9\ X\ 5.25)}$ - 1 =?

8. Evaluate 10% of 360 + 20% of 255.

18301 N. Miami Avenue | Miami | Florida | 33169
Tel. 305.760.7500 | Fax 305.760.7450 | www.ularkin.org

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9. What percentage of 18 is 8?

10. The distance between two cities is 455 miles. How long does it take to drive from one city to the other if the average speed of the car is 65 mile per hour?

11. A customer ordered 7 pounds of strawberries which are sold in baskets. If each basket contains 0.5 (half) pound, how many baskets should be given to fill the order?

12. A recipe calls for 480 milliliters of milk. If the only means a person has to measure the milk is a tablespoon (15 milliliters), how many tablespoons should they measure?

13. If 25 grams of a snack contain 5 grams of nuts, how many grams of nuts will there be in 60 grams of the snack?

14. If a beverage contains 100 milligrams of sugar per milliliter, how much sugar is contained in 0.75 milliliters?

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15. A household cleaning solution, sold as “Cleansol”, is supplied as a 50% concentration of the cleaning agent in water. Different dilutions are needed for various applications. To clean kitchen countertops, it should be used as a 10% solution (diluted with water). How much Cleansol would you use to make 100 milliliters of 10% solution?

16. A patient weighs 220 pounds. What is the weight of this patient in kilograms? (1 pound = 0.454 kilograms)

17. A patient is advised to have 10 milliliters of medication 4 times a day for 5 days. How much (in milliliters) of the medication is needed?

18. Find the volume of a solution that contains 50 milligrams of a drug and has a concentration of 4 milligrams per 1 milliliter?

19. The atomic weights of sodium (Na^{+}) and chlorine (Cl^{-}) are 23 and 35.5, respectively. How many grams of sodium ion are present in 25 grams of sodium chloride (NaCl)?

20. The atomic weights of aluminum (Al^{+3}) and chlorine (Cl^{-}) are 27 and 35.5, respectively. Calculate the molecular weight of aluminum chloride ($AlCl_3$).