Mixture Problems – Day 2
Unit 5: Real World Applications

Solve each question. Round your answer to the nearest hundredth when needed.

1. 8 fl. oz. of a 15% sugar solution was mixed with 7 fl. oz. of pure water. What is the concentration of the mixture?

2. 1 ml of a 20% saline solution was mixed with 5 ml of a 50% saline solution. What is the concentration of the mixture?

3. 8 gal. of a 60% sugar solution was mixed with 2 gal. of pure water. Find the concentration of the new mixture.

4. A metal alloy weighing 7 lb. and containing 55% iron is melted and mixed with 8 lb. of a different alloy which contains 25% iron. What percent of the resulting alloy is iron?

5. How many oz. of a metal containing 50% iron must be combined with 1 oz. of a metal containing 25% iron to form an alloy containing 45% iron?

6. How much soil with 42% clay do you need to add to 2 m^3 of soil with 45% clay in order to make a soil with 44% clay?

7. Paul wants to make a 30% acid solution. He has already poured 8 gal. of pure water into a beaker. How many gal. of a 70% acid solution must he add to this to create the desired mixture?

8. Shanice wants to make a 14% saline solution. She has already poured 9 fl. oz. of pure water into a beaker. How many fl. oz. of a 35% saline solution must she add to this to create the desired mixture?

9. Gabriella mixed together 3 gal. of Brand A fruit drink and 2 gal. of Brand B fruit drink which contains 7% fruit juice. Find the percent of fruit juice in Brand A if the mixture contained 34% fruit juice.

10. 3 L of an acid solution was mixed with 7 L of a 45% acrid solution to make a 42% acid solution. Find the percent concentration of the first solution.

11. Angela made a nut mixture that contains 51% peanuts by mixing together 5 lbs. of mixed nuts that contain 35% peanuts and 20 lbs. of a different brand of mixed nuts. The second brand of mixed nuts contained what percent peanuts?

12. 4 gal. of a sugar solution was mixed with 12 gal. of 8% sugar solution to make a 21% sugar solution. Find the percent concentration of the first solution?

13. Stefan wants to make 15 gal. of a 30% alcohol solution by mixing together a 20% alcohol solution and 50% alcohol solution. How much of each solution must he use?

14. A metallurgist needs to make 14 mg of an alloy containing 50% iron. He is going to melt and combine one metal that is 20% iron with another metal that is 55% iron. How much of each should he use?

15. Thomas wants to make 15 qt. of a 6% acid solution by mixing together a 30% acid solution and pure water. How much of each solution must he use?

16. Jasmine wants to make 20 L of a 6% saline solution by mixing together a 10% saline solution and pure water. How much of each solution must she use?

17. Sara wants to make 20 L of a 58% saline solution by mixing together a 10% saline solution and 90% saline solution. How much of each solution must he use?

18. Jenny asked you to make 10 gal. of fruit punch that contains 22% fruit juice by mixing together some amount of Brand A fruit punch and some amount of Brand B fruit punch. Brand A contains 25% fruit juice and Brand B contains 20% fruit juice. How much of each do you need?