CCM 1 Unit 1: Lesson 5: Mixture Problems

A) 1 oz of bleached flour which costs $8 per oz was combined with 5 oz of unbleached flour which costs $2 per oz. Find the cost per oz of the mixture.

B) A grocer mixes 50 pounds of peanuts that cost $2.49 per pound and walnuts that cost $3.89 per pound to make a mixture that costs $3.19 per pound. How many pounds of walnuts must he use?

C) John has 20 ounces of a 20% of salt solution. How much salt should he add to make it a 25% solution?

D) How many liters of a 70% alcohol solution must be added to 50 liters of a 40% alcohol solution to produce a 50% alcohol solution?

E) Two hundred liters of a punch that contains 35% fruit juice is mixed with 300 liters (L) of another punch. The resulting fruit punch is 20% fruit juice. Find the percent of fruit juice in the 300 liters of punch.

F) 5 fl. oz. of a 2% alcohol solution was mixed with 11 fl. oz. of a 66% alcohol solution. Find the concentration of the new mixture.

CCM 1 Unit 1 Lesson 5 Mixture Problems –Practice

1) Mrs. Park sells a peanut and raisin mix for $6 per lb. How many pounds of raisin which costs $7 per pound should be added to 1 pound of peanuts which cost $4 per pound to make the mixture cost $6 per pound?

2) How many pounds of lima beans that cost $.90 per pound must be mixed with 16 pounds of corn that costs $.50 per pound to make a mixture of vegetables that costs $.65 per pound?

3) Solution A is 50% hydrochloric acid, while solution B is 75% hydrochloric acid. How many liters of each solution should be used to make 100 liters of a solution which is 60% hydrochloric acid?

4) How many ounces of pure water must be added to 50 ounces of a 15% saline solution to make a saline solution that is 10% salt?

NAME _____ DATE _____

CCM 1 Unit 1 Lesson 5 Mixture Problems – Graded Practice

1) 2 m³ of soil containing 35% sand was mixed into 6 m³ of soil containing 15% sand. What is the sand content of the mixture?

2) 9 lbs. of mixed nuts containing 55% peanuts were mixed with 6 lbs. of another kind of mixed nuts that contain 40% peanuts. What percent of the new mixture is peanuts?

3) 16 lb of Brand M Cinnamon was made by combining 12 lb of Indonesian cinnamon which costs $19/lb with 4 lb of Thai cinnamon which costs $11/lb. Find the cost per lb of the mixture.

4) Emily mixed together 9 gal. of Brand A fruit drink and 8 gal. of Brand B fruit drink which contains 48% fruit juice.Find the percent of fruit juice in

5) How many mg of a metal containing 45% nickel must be combined with 6 mg of pure nickel to form an alloy containing 78% nickel?

6) 7 L of an acid solution was mixed with 3 L of a 15% acid solution to make a 29% acid solution. Find the percent concentration of the first solution.

7) 9 gal. of a sugar solution was mixed with 6 gal. of a 90% sugar solution to make a 84% sugar solution. Find the percent concentration of the first solution.

8)A metallurgist needs to make 12.4 lb. of an alloy containing 50% gold. He is going to melt and combine one metal that is 60% gold with another metal that is 40% gold. How much of each should he use?