Mixture Word Problems

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) 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.

4) 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.

5) 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 Brand A if the mixture contained 30% fruit juice.

6) 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?

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Mixture Word Problems

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?

20%

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?

49%

3) 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.

46%

4) 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.

$17/lb

5) 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 Brand A if the mixture contained 30% fruit juice.

14%

6) 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?

4 mg

7) 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.

8) 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.

9) 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?

10) Brand X sells 21 oz. bags of mixed nuts that contain 29% peanuts. To make their product they combine Brand A mixed nuts which contain 35% peanuts and Brand B mixed nuts which contain 25% peanuts. How much of each do they need to use?

7) 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.

   35%

8) 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.

   80%

9) 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?

   6.2 lb. of 60% gold, 6.2 lb. of 40% gold

10) Brand X sells 21 oz. bags of mixed nuts that contain 29% peanuts. To make their product they combine Brand A mixed nuts which contain 35% peanuts and Brand B mixed nuts which contain 25% peanuts. How much of each do they need to use?

   8.4 oz. of Brand A, 12.6 oz. of Brand B