

## Mixture Word Problems

- 1) 7 kg of soybean oil which costs \$4/kg were combined with 14 kg of canola oil which costs \$1/kg. Find the cost per kg of the mixture.
- 2) A sugar solution was made by mixing 8 qt. of a 2% sugar solution and 6 qt. of a 51% sugar solution. Find the concentration of the new mixture.
- 3) A sugar solution was made by mixing 7 ml of a 50% sugar solution and 3 ml of a 80% sugar solution. Find the concentration of the new mixture.
- 4) For her birthday party Kathryn mixed together 3 gal. of Brand A fruit punch and 6 gal. of Brand B. Brand A contains 17% fruit juice and Brand B contains 26% fruit juice. What percent of the mixture is fruit juice?
- 5) How many gal. of a 65% saline solution must be mixed with 8 gal. of pure water to make a 25% solution?
- 6) 1 oz of walnuts were mixed with 4 oz of peanuts which cost \$4/oz to make mixed nuts which cost \$5/oz. What is the price per oz of walnuts?
- 7) Heather wants to make a 36% acid solution. She has already poured 3 fl. oz. of a 72% acid solution into a beaker. How many fl. oz. of a 9% acid solution must she add to this to create the desired mixture?
- 8) Kali mixed together 9 gal. of Brand A fruit drink and 6 gal. of Brand B fruit drink which contains 5% fruit juice. Find the percent of fruit juice in Brand A if the mixture contained 11% fruit juice.
- 9) To build the garden of your dreams you need 10 ft<sup>3</sup> of soil containing 17% clay. You have two types of soil you can combine to achieve this: soil with 35% clay and soil with 10% clay. How much of each soil should you use?
- 10) Bronze which costs \$9.10/kg is made by combining copper which costs \$8.90/kg with tin which costs \$9.50/kg. Find the number of kg of copper and tin required to make 15.3 kg of bronze.
- 11) A metallurgist needs to make 3 oz. of an alloy containing 76% platinum. She is going to melt and combine one metal that is 90% platinum with another metal that is 70% platinum. How much of each should she use?
- 12) Eduardo wants to make 17.1 fl. oz. of a 60% sugar solution by mixing together a 80% sugar solution and a 50% sugar solution. How much of each solution must he use?

## Mixture Word Problems

- 1) 7 kg of soybean oil which costs \$4/kg were combined with 14 kg of canola oil which costs \$1/kg. Find the cost per kg of the mixture.

\$2/kg

- 3) A sugar solution was made by mixing 7 ml of a 50% sugar solution and 3 ml of a 80% sugar solution. Find the concentration of the new mixture.

59%

- 5) How many gal. of a 65% saline solution must be mixed with 8 gal. of pure water to make a 25% solution?

5 gal.

- 7) Heather wants to make a 36% acid solution. She has already poured 3 fl. oz. of a 72% acid solution into a beaker. How many fl. oz. of a 9% acid solution must she add to this to create the desired mixture?

4 fl. oz.

- 9) To build the garden of your dreams you need 10 ft<sup>3</sup> of soil containing 17% clay. You have two types of soil you can combine to achieve this: soil with 35% clay and soil with 10% clay. How much of each soil should you use?

2.8 ft<sup>3</sup> with 35% clay, 7.2 ft<sup>3</sup> with 10% clay

- 11) A metallurgist needs to make 3 oz. of an alloy containing 76% platinum. She is going to melt and combine one metal that is 90% platinum with another metal that is 70% platinum. How much of each should she use?

0.9 oz. of 90% platinum, 2.1 oz. of 70% platinum

- 2) A sugar solution was made by mixing 8 qt. of a 2% sugar solution and 6 qt. of a 51% sugar solution. Find the concentration of the new mixture.

23%

- 4) For her birthday party Kathryn mixed together 3 gal. of Brand A fruit punch and 6 gal. of Brand B. Brand A contains 17% fruit juice and Brand B contains 26% fruit juice. What percent of the mixture is fruit juice?

23%

- 6) 1 oz of walnuts were mixed with 4 oz of peanuts which cost \$4/oz to make mixed nuts which cost \$5/oz. What is the price per oz of walnuts?

\$9/oz

- 8) Kali mixed together 9 gal. of Brand A fruit drink and 6 gal. of Brand B fruit drink which contains 5% fruit juice. Find the percent of fruit juice in Brand A if the mixture contained 11% fruit juice.

15%

- 10) Bronze which costs \$9.10/kg is made by combining copper which costs \$8.90/kg with tin which costs \$9.50/kg. Find the number of kg of copper and tin required to make 15.3 kg of bronze.

10.2 kg of copper, 5.1 kg of tin

- 12) Eduardo wants to make 17.1 fl. oz. of a 60% sugar solution by mixing together a 80% sugar solution and a 50% sugar solution. How much of each solution must he use?

5.7 fl. oz. of 80% solution, 11.4 fl. oz. of 50% solution