

Mixture Problems

Problem 1.

A solution of 180 gallons contains 20% of A. What amount has to be added to increase the percent of A to 25%?

Problem 2.

How many quarts of water must added to 5 quarts of a 35% solution of hydrochloric acid to dilute it to a 25% solution?

Problem 3.

Item A sells for \$16 per pound, and item B sells for \$24 per pound. How many pounds of A should be added to B to create 1000 pounds of a product that sells for \$18.

Problem 4.

Three mixtures of alcohol consist of 6 gallons of 12% alcohol, 8 gallons of 14% alcohol, and 12 gallons of 35% alcohol. If all of the containers are combined into one container, what is the combined percent alcohol?

Problem 5.

In what proportion should 45% alcohol mixture and 85% alcohol mixture be mixed to give a 68% mixture?

Problem 6.

How much water must be added to 1 pint of a solution of 25% antiseptic to reduce it to 15%?

Problem 7.

500 gallons of alcohol is 75% pure. How much water must be added to make it 40% pure?

Problem 8.

Products A and B are worth \$1.20 and \$1.60 per pound, respectively, How much of each product must be combined to make a new product of 50 pounds which is worth \$1.5 per pound?

Problem 9.

How much cream which is 25% butterfat should be added to 1200 pounds of milk which is 3% butterfat to produce milk testing 4% butterfat?

Problem 10.

One alloy is 25% silver and another is 40% silver. How much of each should be used to produce 60 pounds of an alloy that is 30% silver?

Problem 11.

A confectioner wishes to mix chocolates worth 80 cents a pound with 40 pounds of bonbons worth 65 cents a pound to make a mixture worth 75 cents a pound. How many pounds of chocolates should he use?

Problem 12.

How much alcohol must be added to a mixture of 12 ounces of alcohol and 30 ounces of water to produce a mixture that is 60% alcohol?

Problem 13.

An automobile radiator holds 4 gallons and contains 25% antifreeze. How much of the solution must be drained from the radiator and antifreeze added to make the solution test 35% antifreeze?