

Mixture Problems

1. A solution of 10% acid is added to a solution of 30% acid to make 110 ml solution of 22% acid. How much of each type acid is needed.
2. Some 15¢ candy and some 20¢ candy is mixed to make a package of 40 candies. How many of each type are needed if the package sells for \$7.15?
3. Thirty kilograms of soybean worth 70¢/kg is added to some corn worth 80¢/kg to make some animal feed worth 76¢/kg. How many kg of corn was used in the mixture?
4. Forty pounds of cashews costing \$5.60 per pound were mixed with 100 lb of peanuts costing \$1.89 per pound. Find the cost per pound of the resulting mixture.
5. A coffee merchant combines coffee costing \$5.50 per pound with coffee costing \$3.00 per pound. How many pounds of each should be used to make 40 lb of a blend costing \$4.00 per pound?
6. Adult tickets for a play cost \$5.00 and children's tickets cost \$2.00. For one performance, 460 tickets were sold. Receipts for the performance were \$1,880.00. Find the number of adult tickets sold.
7. Tickets for a school play sold for \$2.50 for each adult and \$1.00 for each child. The total receipts for 113 tickets sold were \$221.00. Find the number of adult tickets sold.
8. Fifty liters of pure maple syrup that cost \$9.50 per liter are mixed with imitation maple syrup that costs \$4.00 per liter. How much imitation maple syrup is needed to make a mixture that costs \$5.00 per liter?
9. To make a flour mix, a miller combined soybeans that cost \$8.50 per bushel with wheat that costs \$4.50 per bushel. How many bushels of each were used to make a mixture of 800 bushels costing \$5.50 per bushel?
10. A goldsmith combined pure gold that cost \$400 per ounce with an alloy of gold costing \$150 per ounce. How many ounces of each were used to make 50 oz of gold alloy costing \$250 per ounce?
11. A silversmith combined pure silver that costs \$5.20 an ounce with 50 oz of a silver alloy that cost \$2.80 and ounce. How many ounces of the pure silver were used to make an alloy of silver costing \$4.40 an ounce?
12. A tea mixture was made from 30 lb of tea costing \$6.00 per pound and 70 lb of tea costing \$3.20 per pound Find the cost per pound of the tea mixture.

13. Find the cost per ounce of a face cream mixture made from 100 oz of face cream that cost \$3.46 per ounce and 60 oz of face cream that cost \$12.50 per ounce.
14. A fruit stand owner combined cranberry juice that cost \$4.20 per gallon with 50 gal of apple juice that cost \$2.10 per gallon. How much cranapple juice costing \$3.00 per gallon was made?
15. Walnuts that cost \$4.05 per kilogram were mixed with cashews that cost \$7.25 per kilogram. How many kilograms of each were used to make a 50-kilogram mixture costing \$6.25 per kilogram? Round to the nearest tenth.
16. A grocer combines 50 gal of cranberry juice that costs \$3.50 per gallon with apple juice that costs \$2.50 per gallon. How many gallons of apple juice must be used to make cranapple juice that costs \$2.75 per gallon?
17. An advertisement for an orange drink claims that the drink contains 10% orange juice. How much pure orange juice would have to be added to 5 quarts of the drink to obtain a mixture containing 40% orange juice?
18. At the Golden Oldies Theater, tickets for adults cost \$5.50 and tickets for children cost \$3.50. How many of each type of ticket was purchased if 21 tickets were bought for \$83.50?
19. A liter of cream has 9.2% butterfat. How much skim milk containing 2% butterfat should be added to the cream to obtain a mixture with 6.4% butterfat?
20. Anne Leibowitz owns "The Coffee Pot," a specialty coffee store. She wants to create a special mix using two coffees, one priced at \$6.40 per pound and the other at \$7.28 per pound. How many pounds of the \$7.28 coffee should she mix with the 9 pounds of the \$6.40 coffee to sell the mixture for \$6.95 per pound?
21. A pharmacist has 150 dL of a 25% solution of peroxide in water. How many deciliters of pure peroxide should be added to obtain a 40% solution?
22. Ground chuck sells for \$1.75 per pound. How many pounds of ground round selling for \$2.45 per pound should be mixed with 20 pounds of ground chuck to obtain a mixture that sells for \$2.05 per pound?
23. Corn worth \$1.80/kg and oats worth \$2.10/kg are mixed to make 100 kg of feed worth \$190.50. How many kilograms of each grain are used?
24. Some 12¢ balloons and some 18¢ balloons are mixed to make a package of 20 balloons. How many balloons of each kind are needed to make a package worth \$3.06?