

Section 3.6 – Mixture Problems

Problem Set 1

Find the following information.

1. If you have \$1.25 in your pocket made up of quarters and dimes and you have 2 more dimes than quarters then how many of each coin do you have?
2. Say you have a mixture of pennies, nickels and dimes. If you have twice as many dimes as nickels and five more pennies than dimes and the total value of the coins is \$4.10, how many of each kind of coin do you have?
3. If you have \$110 in your wallet made up of 5 and 20 dollar bills. If the number of 20 dollar bills is one more than twice the number of 5 dollar bills, how many of each bill do you have?
4. Brass is an alloy of copper and zinc. Assume that copper costs \$3 per kilogram and zinc costs \$1.80 per kilogram. If you need 100 kilograms of a copper/zinc alloy at a cost of \$216, how much of each metal do you need?
5. Carbon steel is an alloy of carbon and steel. If iron costs 70 cents per kilogram and carbon costs 24 cents per kilogram, how much of each element do you need to make a batch of carbon steel that costs \$1,375?
6. A spice mix is made up of oregano at \$19 per pound and thyme at \$14 per pound. If you need 20 pounds of the mix at a total cost of \$320, how much of each spice do you need?
7. A company is making a new dog food by mixing together two existing kinds. The first kind costs \$2.12 per pound and the second costs \$2.96 per pound. For their first trial, they need a 30 pound batch. If the total cost of the batch has to be \$80, how much of each type of dog food do they need?
8. The promoters of a concert sell 100 tickets. Tickets sold in advance cost \$35 while tickets bought at the door cost \$45. If the total revenue from tickets sales was \$3700, how many of each type of ticket did they sell?