EMT112 Practice Problems

Simultaneous Equations

September 16, 2010

1. For each problem write a system of equations and then solve.

   (a) The sum of two numbers is -16, and their difference is 8. Find the numbers.

   (b) Tickets for a concert were sold to adults for $3000 and to students for $2000. If the total receipts were $824,000 and twice as many adult tickets as student tickets were sold, then how many of each were sold?

   (c) Canola oil is 7% saturated fat, and corn oil is 14% saturated fat. Crisco sells a blend, Crisco Canola and Corn Oil, which is 11% saturated fat. How many gallons of each type of oil must be mixed to get 280 gallons of this blend?

   (d) John has 35 coins consisting of $10 and $5 coins. If the value of the coins is $330, then how many of each type does he have?

   (e) Two hundred people were on a charter flight to Las Vegas. Some paid $200 for their tickets and some paid $250. If the total revenue for the flight was $44,000 then how many tickets of each type were sold?

   (f) On Monday, Joe paid $680 for three sandwiches and two coffees. On Tuesday he paid $720 for two sandwiches and three coffees. On Wednesday he bought one coffee and one sandwich. How much did he pay?