Name: _____   Date: _____

Systems of Equations

Word Problems

1) A rental company charges a flat fee of x dollars for a floor sander rental plus y dollars per hour for the rental. One customer rents a floor sander for 4 hours and pays $63. Another customer rents a floor sander for 6 hours and pays $87.

   a) Write a system of equations used to find the flat fee and cost per hour for the rental.

   b) Solve the system using substitution or elimination.

   c) What does your solution mean?

   d) How much would it cost someone to rent a sander for 11 hours?

2) A girl scout troop is selling cookies. They have 24 boxes to sell and need to make $62. If Thin Mints sell for $2 a box and Samoas sell for $3 a box.

   a) Write a system of equations used to find out how many boxes of each type of cookie they need to sell.

   b) Solve the system using substitution or elimination.

   c) What does your solution mean?

   d) How much would they make if they sold a total of 24 boxes and 8 of those were Thin Mints?

3) The principal is buying muffins and doughnuts for the teachers at the meeting tomorrow morning. He has 16 people attending the meeting. Each person gets only one item. The muffins sell for $2.50 each and the doughnuts sell for $1.50 each.   He spends a total of $30.

      a) Write a system of equations used to find the number of muffins and the number of doughnuts purchased.

      b) Solve the system using substitution or elimination.

      c) What does your solution mean?

4) A store sells t-shirts and shorts. One customer buys 5 t-shirts and 2 pairs of shorts and pays $100 for their purchase. Another customer buys 4 t-shirts and 3 pairs of shorts and pays $108 for their purchase.

      a) Write a system of equations used to find the cost of each t-shirt and each pair of shorts?

      b) Solve the system using substitution or elimination.

      c) What does your solution mean?

5) Two families are going to a baseball game. One family buys two student tickets and three adult tickets and pays $84. Another family buys three student tickets and four adult tickets and pays $117. How much is each student ticket and each adult ticket?

      a) Write a system of equations used to find the cost of each student ticket and each adult ticket.

      b) Solve the system using substitution or elimination.

      c) What does your solution mean?