Remediation Unit 6 Objective 5
Applications of Systems of Equations

Steps in Writing and Solving a System of Equations:

1. Read and underline key words
2. Identify the variables (Let x = ; y =)
3. Write a system of equations that models the problem, using keywords from the problem
   Remember: 2 Unknowns means 2 Equations
4. Solve the system – use either Elimination or Substitution
5. Write a sentence interpreting your answer

Practice

1.) Ian bought flowers and candy boxes. Flowers costs $9 each while candy boxes are only $8 each. If Ian spent $168 and only ended up with 19 items, how many flowers and candy boxes did Ian buy?

Let x =
y =

Equations (you need 2 equations since you have 2 unknowns)

Solution: _____ Interpret Answer:

2.) Kate asked a bank teller to cash a $180 check using only $20 bills and $10 bills. The teller gave her a total of 11 bills. How many of each bill was Kate given?

Let x =
y =

Equations:

Solution: _____ Interpret Answer:

3.) Sam bought Tshirts and socks. Tshirts are on sale at $10 each while socks are currently sold at $8 each. If Sam spent $172 and only got 20 items, how many Tshirts and socks did Sam buy?

Let x =
y =

Equations:

Solution: _____ Interpret Answer:

4.) A caterer's total cost for catering a party includes a fixed cost, which is the same for every party. In addition the caterer charges a certain amount for each guest. If it costs $300 to serve 25 guests and $420 to serve 40 guests, find the fixed cost and the cost per guest.

Let x =
y =

Equations:

Solution: _____ Interpret Answer:

5.) If you buy six pens and one mechanical pencil, you'll get only $1 change from your $10 bill. But if you buy four pens and two mechanical pencils, you'll get $2 change. How much does each pen and each pencil cost?

Let x =
y =

Equations:

Solution: _____ Interpret Answer:

6.) A car rental agency charges a daily fee plus a cost per mile. If a car driven 40 miles in one day cost $28, and the same car driven 100 miles in one day cost $37, what are the daily fee and the cost per mile?

Let x =
y =

Equations:

Solution: _____ Interpret Answer: