5.2

SOLVING SYSTEMS OF LINEAR EQUATIONS BY SUBSTITUTION (WORD PROBLEMS)

Writing equations - Revisit

Write the following as equations in standard form.

1) **Your class is taking a trip to a science museum. You can travel in small and large vans. A small van holds 8 people, and a large van holds 12 people. There will be 144 people on the trip.**

2) **People at a banquet will be seated at rectangular and round tables. Rectangular tables seat 6 people, and round tables seat 10 people. There will be 120 people in the banquet.**

3) **You spend $80 on *c* CD's that cost $15 each and *d* DVDs that cost $20 each.**

Writing System of Linear Equations

Define your variables and then write the following as two equations.

1) **The sum of two numbers x and y is 35. The value of x is 4 times the value of y.**

2) **The difference between two numbers y and x is 12. The value of y is 5 times the value of x.**

Writing System of Linear Equations

Define your variables and then write the following as two equations.

3) You have twice as many apples as oranges, and you have 12 apples and oranges altogether.

4) You have a total of 5 coins. Some are nickels and some are dimes. The total value of is 40 cents

Writing System of Linear Equations

Define your variables and then write the following as two equations.

5) The sum of two numbers is 10. The bigger number is 1 more than twice the smaller number.

6) Five bagels and 4 donuts cost $7 altogether. A donut costs $0.40 more than a bagel.

Solveing Systems of Linear Equations

Define your variables, write the following as two equations, and then solve.

1) You buy a shirt and a hat for $28. The shirt costs $2 more than the other.

Solveing Systems of Linear Equations

Define your variables, write the following as two equations, and then solve.

2) The sum of two numbers is 14. Their difference is 10.

Solveing Systems of Linear Equations

Define your variables, write the following as two equations, and then solve.

3) You buy 2 sandwiches for $8. One sandwich costs 3 times as much as the other sandwich. How much was each sandwich?

Solveing Systems of Linear Equations

Define your variables, write the following as two equations, and then solve.

4) Jack has twice as much money as Jill. If they have altogether $36. How much does each have?