

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.

Solving 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.

Solving 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.

Solving 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?

Solving 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?