

1. Define variables, write a system of equations to describe each problem, and then solve the system algebraically.

<p>A) The sum of two numbers is 5 and their difference is 9. Label variables, write a system of equations and solve to find the two numbers.</p>	<p>B) A farm raises a total of 220 animals that are chickens and pigs. The number of legs of stock in the farm total 520. How many chickens and how many pigs? Label variables, write a system of equations and solve to find the answer.</p>
<p>C) Lucy bought 4 roses and 6 tulips for \$15.38. John bought 3 roses and 4 tulips for \$10.96. Label variables, write a system of equations and solve to find the cost of one rose and the cost of a tulip.</p>	<p>D) An investor bought 3 shares of stock A and 2 shares of stock B for \$41. Stock A costs \$2.00 more than stock B. Label variables, write a system of equations and solve to find the cost of one share of Stock A and one share of stock B.</p>

<p>1. You bought 8 mangoes and 3 apples for \$18 and 3 mangoes and 5 apples for \$14.50. Define variables, write a system of equations, and solve it to find how much one mango and one apple cost.</p>	<p>2. Max bought 5 toy cars and 6 toy planes for \$43.77. Clive bought 2 cars and 4 planes for \$24.18. Define variables, write a system of equations and solve it to find the cost of one car and the cost of one plane.</p>
<p>3. Last Saturday, 46 kids took the SAT. The number of girls was 8 more than the number of boys. Define variables, write a system of equations to find the number of boys and the number of girls who took the SAT last Saturday, and solve it.</p>	<p>4. The sum of two numbers is 12 and their difference is 4. Define variables, write a system of equations and solve to find the two numbers.</p>

Solve each system using substitution or elimination. Tell whether the system has one solution, infinitely many solutions or no solution.

5. $x - 3y = -7$
 $2x = 6y - 14$

6. $9x + 8y = 15$
 $9x + 8y = 30$

7. $5x - 9y = -43$
 $3x + 8y = 68$