

Name: _____

Ch 7.2 Solving Systems of Equations with the Substitution Method

Use the substitution method to solve the linear system.

1. $y = x + 3$

$3x - y = 5$

4. $x - 2y = -13$

$y = -2x - 6$

7. $-x + 3y = 4$

$x + 6y = 14$

2. $4x + y = 9$

$y = -7$

5. $x - y = 10$

$5x - y = -6$

8. $3x + 2y = 8$

$x + 4y = -4$

3. $3x = 9$

$-2x + y = -8$

6. $4x + y = 2$

$x - y = -17$

9. $x - 5y = -3$

$4x - 3y = 5$

10. *Mowing and Shoveling* Last year you mowed grass and shoveled snow for 10 households. You earned \$200 per household mowing for the entire season and \$180 per household shoveling for the entire season. If you earned a total of \$1880 last year, how many households did you mow and shovel for? Assign labels to the verbal model below. Write and solve an algebraic model.
11. At an ice cream parlor, ice cream cones cost \$1.10 and sundaes cost \$2.35. One day, the receipts for a total of 172 cones and sundaes were \$294.20. How many cones were sold?
12. You purchase 8 gal of paint and 3 brushes for \$152.50. The next day, you purchase 6 gal of paint and 2 brushes for \$113.00. How much does each gallon of paint and each brush cost?