Name _____ Class _____ Date _____

Practice 3-1

Solving Two-Step Equations

Solve each equation. Check your answer.

1. $5a + 2 = 7$
2. $2x + 3 = 7$
3. $3b + 6 = 12$
4. $9 = 5 + 4t$
5. $4a + 1 = 13$
6. $-t + 2 = 12$

Write an equation to model each situation. Then solve.

7. You want to buy a bouquet of yellow roses and baby's breath for \$16. The baby's breath costs \$3.50 per bunch, and the roses cost \$2.50 each. You want one bunch of baby's breath and some roses for your bouquet. How many roses can you buy?
8. Suppose you walk at the rate of 210 ft/min. You need to walk 10,000 ft. How many more minutes will it take you to finish if you have already walked 550 ft?
9. Suppose you have shelled 6.5 lb of pecans, and you can shell pecans at a rate of 1.5 lb per hour. How many more hours will it take you to shell a total of 11 lb of pecans?
10. To mail a first class letter, the U.S. Postal Service charges \$.34 for the first ounce and \$.21 for each additional ounce. It costs \$1.18 to mail your letter. How many ounces does your letter weigh?
11. Suppose you want to buy one pair of pants and several pairs of socks. The pants cost \$24.95, and the socks are \$5.95 per pair. How many pairs of socks can you buy if you have \$50.00 to spend?

Solve each equation. Check your answer.

12. $5.8n + 3.7 = 29.8$
13. $67 = -3y + 16$
14. $-d + 7 = 3$
15. $\frac{m}{9} + 7 = 3$
16. $6.78 + 5.2x = -36.9$
17. $5z + 9 = -21$
18. $3x - 7 = 35$
19. $36.9 = 3.7b - 14.9$
20. $4s - 13 = 51$
21. $9f + 16 = 70$
22. $11.6 + 3a = -16.9$
23. $-9 = -\frac{h}{12} + 5$
24. $-c + 2 = 5$
25. $-67 = -8n + 5$
26. $22 = 7 - 3a$
27. $\frac{k}{3} - 19 = -26$
28. $-21 = \frac{n}{3} + 2$
29. $3x + 5.7 = 15$
30. $\frac{a}{5} - 2 = -13$
31. $2x + 23 = 49$
32. $\frac{x}{2} + 8 = -3$

Justify each step.

33. $24 - x = -16$

a. $24 - x - 24 = -16 - 24$

b. $-x = -40$

c. $-1(-x) = -1(-40)$

d. $x = 40$

34. $\frac{x}{7} + 4 = 15$

a. $\frac{x}{7} + 4 - 4 = 15 - 4$

b. $\frac{x}{7} = 11$

c. $7(\frac{x}{7}) = 7(11)$

d. $x = 77$

35. $-8 = 2x - 5$

a. $-8 + 5 = 2x - 5 + 5$

b. $-3 = 2x$

c. $-\frac{3}{2} = \frac{2x}{2}$

d. $-\frac{3}{2} = x$