

**8-2 Skills Practice: Solving Two-Step Equations**

Solve each equation. Check your solution. (*show your work for all problems!*)

1.  $3g + 5 = 17$

2.  $9 = 4a + 13$

3.  $13 = 5m - 2$

4.  $-15 = 2t - 11$

5.  $7k - 5 = -19$

6.  $13 = 4x - 11$

7.  $10 = \frac{z}{2} + 7$

8.  $6 + \frac{n}{5} = -4$

9.  $4 - 3y = 31$

10.  $15 - 2b = -9$

11.  $-\frac{1}{3}y - 6 = -11$

12.  $16 - \frac{r}{7} = 21$

13.  $30 = 5d - 8d$

14.  $w + 3w = 20$

15.  $5 - 7m + 9m = 11$

16.  $-18 = 8x - 9 - 5x$

17.  $25 = s + 13 - 4s$

18.  $6a + 7 - a = -18$

19.  $3(y + 5) = 21$

20.  $7(p - 3) = 35$

21.  $-48 = 6(v + 2)$

22.  $\frac{k-3}{4} = 10$

23.  $\frac{z+5}{7} = -3$

24.  $\frac{9+t}{12} = -3$

25. Mrs. Williams shops at a store that has an annual membership fee of \$30. Today she paid her annual membership and bought several fruit baskets costing \$15 each as gifts for her coworkers. Her total was \$105. Solve the equation  $15b + 30 = 105$  to find the number of fruit baskets Mrs. Williams purchased.
26. A card game has 50 cards. After dealing 7 cards to each player, Tupi has 15 cards left over. Solve the equation  $50 - 7p = 15$  to find the number of players.
27. It took Lisa 85 minutes to wash three cars. She spent  $x$  minutes on each car and 10 minutes putting everything away. Solve the equation  $3x + 10 = 85$  to find how long it took to wash each car.
28. Rick jogged the same distance on Tuesday and Friday, and 8 miles on Sunday, for a total of 20 miles for the week. Solve the equation  $2x + 8 = 20$  to find the distance Rick jogged on Tuesday and Friday.
29. Burt's parents allow him to watch a total of 10 hours of television per week. This week, Burt is planning to watch several two-hour movies and four hours of sports. Solve the equation  $2x + 4 = 10$  to find the number of movies Burt is planning to watch this week.

30. Write an equation to represent the length of  $\overline{PQ}$ . Then find the value of  $y$ .

