

# Lesson 2 Skills Practice

Day 1

## Solve Two-Step Equations

Solve each equation. Check your solution.

1.  $3n + 4 = 7$

2.  $9 = 2s + 1$

3.  $4c - 6 = 2$

4.  $-4 = 2t - 2$

5.  $3f - 12 = -3$

6.  $8 = 4v + 12$

7.  $5d - 6 = 9$

8.  $2k + 12 = -4$

9.  $-5 = 3m - 14$

10.  $0 = 8z + 8$

11.  $9a - 2 = -2$

12.  $-8 + 4s = -16$

13.  $-1 = 4 - 5x$

14.  $5 = 9 - 2x$

15.  $-2x + 12 = 14$

16.  $1 - x = 8$

17.  $-2 = -x + 4$

18.  $11 = 2 - 3x$

19.  $12 - 3x = 6$

20.  $-6x + 5 = 17$

21.  $13 = 18 - 5x$

22.  $6x + 2 = 26$

23.  $-18 = 4y + 10$

24.  $-24 - a = -15$

25.  $5z - 17 = 13$

26.  $22 = 4 + 6e$

27.  $-15 = 2r + 1$

28.  $9k - 8 = 10$

29.  $-27 = -7 - 4c$

30.  $11 = 18 + 7f$

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**Lesson 3 Skills Practice***Day 2***Write Two-Step Equations****Translate each sentence into an equation.**

1. Four more than twice a number is 8.
2. Three more than four times a number is 15.
3. Five less than twice a number is 7.
4. One less than four times a number is 11.
5. Seven more than the quotient of a number and 2 is 10.
6. Six less than six times a number is 12.
7. Five less than the quotient of a number and 3 is  $-7$ .
8. Seven more than twice a number is 1.

**Define a variable. Then write and solve an equation to find each number.**

9. The difference between 5 times a number and 3 is 12.
10. Nine more than three times a number is  $-6$ .
11. Nine more than the quotient of a number and 4 is 12.
12. Four less than the quotient of a number and 3 is  $-10$ .
13. Nine less than six times a number is  $-15$ .
14. Three less than the quotient of a number and 6 is 1.
15. Eight more than the quotient of a number and 5 is 3.
16. The difference between twice a number and 11 is  $-23$ .

**Lesson 4 Skills Practice***Day 3***Solve Equations with Variables on Each Side****Solve each equation. Check your solution.**

1.  $3w + 6 = 4w$

2.  $a + 18 = 7a$

3.  $8c = 5c + 21$

4.  $11d + 10 = 6d$

5.  $2e = 4e - 16$

6.  $7v = 2v - 20$

7.  $4n - 6 = 10n$

8.  $2y + 27 = 5y$

9.  $8h = 6h - 14$

10.  $18 - 2g = 4g$

11.  $4x - 9 = 6x - 13$

12.  $5c - 15 = 2c + 6$

13.  $t + 10 = 7t - 14$

14.  $8z + 6 = 7z + 4$

15.  $2e - 12 = 7e + 8$

16.  $9k + 6 = 8k + 13$

17.  $2d + 10 = 6d - 10$

18.  $-2a - 9 = 6a + 15$

19.  $8 - 3k = 3k + 2$

20.  $7t - 4 = 10t + 14$

21.  $3c - 15 = 17 - c$

22.  $14 + 3n = 5n - 6$

23.  $3y + 5.2 = 2 - 5y$

24.  $10b - 2 = 7b - 7.4$

25.  $2m - 2 = 6m - 4$

26.  $3g + 5 = 7g + 4$

27.  $4s - 1 = 8 - 2s$

28.  $9w + 3 = 4w - 9$

29.  $6z - 7 = 2z - 2$

30.  $3 - a = 4a + 12$

**Lesson 5 Skills Practice**

Day 4

**Solve Multi-Step Equations**

Solve each equation. Check your solution.

1.  $4(2 + 3c) = 56$

2.  $63 = -3(1 - 2n)$

3.  $-29 = 5(2a - 1) + 2a$

4.  $-g + 2(3 + g) = -4(g + 1)$

5.  $7p - (3p + 4) = -2(2p - 1) + 10$

6.  $-3(t + 5) + (4t + 2) = 8$

7.  $\frac{1}{2}(-4 + 6x) = \frac{1}{3}x + \frac{2}{3}(x + 9)$

8.  $-8 - n = -3(2n - 4)$

9.  $2\left(\frac{1}{2}q + 1\right) = -3(2q - 1) + 4(2q + 1)$

10.  $-4(2 - y) + 3y = 3(y - 4)$

11. **HEALTH CLUB** Currently, 96 members participate in the morning workout, and this number has been increasing by 2 people per week. Currently, 80 members participate in the afternoon workout, and this number has been decreasing by 3 people per week. In how many weeks will the number of people working out in the morning be double the number of people working out in the afternoon?

12. **DISTANCE** Two cyclists leave town at the same time on the same road going in the same direction. Cyclist A is going 6 miles per hour faster than cyclist B. After 8 hours, cyclist A has traveled three times the distance as cyclist B. Use the equation  $24x = 8(x + 6)$  to find how fast cyclist B is traveling.

**Lesson 5 Extra Practice***Day 5***Multi-Step Equations****Solve each equation. Check your solution.**

1.  $6(m - 2) = 12$

2.  $4(x - 3) = 4$

3.  $5(2d + 4) = 35$

4.  $w + 6 = 2(w - 6)$

5.  $3(b + 1) = 4b - 1$

6.  $7w - 6 = 3(w + 6)$

7.  $4(k - 6) = 6(k + 2)$

8.  $3(x - 0.8) = 4x + 4$

9.  $\frac{5}{9}(g + 18) = \frac{1}{6}g + 3$

10.  $4(c + 12) = 2c + 18$

11.  $7(d - 2) = 5(d + 2)$

12.  $5p - 17 = 2(2p - 7)$

13.  $4(3z - 2) = 9z - 7$

14.  $7s + 2 = 4(s + 1)$

15.  $6(k + 1) = 2k + 7$

16.  $6(n - 1) = 2(n + 1)$

17.  $\frac{1}{4}y - 3 = 5 - 2y$

18.  $\frac{2}{3}(3q + 6) = 8$

# Lesson 3 Skills Practice

*Extra*

## Functions

Find each function value.

1.  $f(2)$  if  $f(x) = x + 4$

2.  $f(9)$  if  $f(x) = x - 8$

3.  $f(3)$  if  $f(x) = 2x + 2$

4.  $f(6)$  if  $f(x) = 2x - 5$

5.  $f(-7)$  if  $f(x) = 3x + 6$

6.  $f(8)$  if  $f(x) = 3x - 10$

7.  $f(-5)$  if  $f(x) = 4x + 2$

8.  $f(-3)$  if  $f(x) = -4x - 4$

9.  $f(-4)$  if  $f(x) = -5x - 3$

Choose four values for  $x$  to make a function table for each function. Then state the domain and range of the function.

10.  $f(x) = x + 7$

11.  $f(x) = x - 13$

12.  $f(x) = 2x + 8$

$x$	$x + 7$	$f(x)$

$x$	$x - 13$	$f(x)$

$x$	$2x + 8$	$f(x)$

13.  $f(x) = 2x - 3$

14.  $f(x) = 3x + 4$

15.  $f(x) = 7 - 3x$

$x$	$2x - 3$	$f(x)$

$x$	$3x + 4$	$f(x)$

$x$	$7 - 3x$	$f(x)$

16.  $f(x) = 4x + 5$

17.  $f(x) = 1 - 4x$

18.  $f(x) = 6x - 2$

$x$	$4x + 5$	$f(x)$

$x$	$1 - 4x$	$f(x)$

$x$	$6x - 2$	$f(x)$

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