

# Exercises

## A

Practice

Solve each equation. Use algebra tiles if necessary.

- |                     |                     |                      |
|---------------------|---------------------|----------------------|
| 15. $-2 + y = -8$   | 16. $w - 1 = 3$     | 17. $n + 5 = -2$     |
| 18. $7 = q - 4$     | 19. $p - 6 = 2$     | 20. $3 = z + 10$     |
| 21. $-3 + k = -3$   | 22. $4 = g + 6$     | 23. $2 + f = -1$     |
| 24. $10 = 8 + b$    | 25. $-2 = d + (-3)$ | 26. $x + 6 = -23$    |
| 27. $-7 = a + (-9)$ | 28. $k - 7 = -8$    | 29. $p - 9 = 7$      |
| 30. $-12 + r = -2$  | 31. $v + 9 = 2$     | 32. $-13 = c + (-4)$ |
33. What is the value of  $m$  if  $8 + m = -13$ ?
34. If  $a + (-14) = -16$ , what is the value of  $a$ ?
35. When 6 is subtracted from  $d$ , the result is 5. Find the value of  $d$ .

# Exercises

## B

Practice

Solve each equation. Check your solution.

- |   |                                     |   |
|---|-------------------------------------|---|
| 18. $k + (-8) = 29$                               | 19. $y - (-7) = 3$                  | 20. $-9 = 8 + q$                                  |
| 21. $b - 14 = -11$                                | 22. $-21 = 5 + c$                   | 23. $-3 + m = 10$                                 |
| 24. $27 + y = -49$                                | 25. $7 + w = -6$                    | 26. $11 = r + (-9)$                               |
| 27. $-15 + y = -63$                               | 28. $-39 = n - 24$                  | 29. $52 = 18 + j$                                 |
| 30. $k - 14.6 = 9.2$                              | 31. $3.4 = m + 7.2$                 | 32. $-3.41 + n = 0.23$                            |
| 33. $\frac{5}{6} = g - \left(-\frac{1}{6}\right)$ | 34. $\frac{3}{4} + y = \frac{7}{8}$ | 35. $g + \left(-\frac{4}{9}\right) = \frac{2}{3}$ |

# Exercises

## C

Practice

Solve each equation. Check your solution.

- |                         |                          |                           |
|-------------------------|--------------------------|---------------------------|
| 11. $4c = 24$           | 12. $9p = 63$            | 13. $30 = 2x$             |
| 14. $-6a = 60$          | 15. $-8t = 56$           | 16. $-3 = -5n$            |
| 17. $14 = 0.5x$         | 18. $0 = 3.9c$           | 19. $2.2r = 11$           |
| 20. $\frac{9}{2}t = 1$  | 21. $\frac{1}{2}y = 32$  | 22. $\frac{b}{3} = -5$    |
| 23. $10 = \frac{a}{-7}$ | 24. $-\frac{2}{7}x = -6$ | 25. $-18 = -\frac{2}{3}p$ |

# Exercises

## D

Practice

Solve each equation. Check your solution.

- |                             |                           |                             |
|-----------------------------|---------------------------|-----------------------------|
| 14. $6 = 4n + 2$            | 15. $8 + 3k = 5$          | 16. $3b - 7 = 2$            |
| 17. $15 = 1 - 2t$           | 18. $12 = -5h + 2$        | 19. $-13 - 9y = -13$        |
| 20. $8 + 1.6a = 0$          | 21. $0.3x + 3 = 4.8$      | 22. $6.5 = 2x + 4.1$        |
| 23. $27 = 3 + 2.5t$         | 24. $-4 - 0.7m = 2.3$     | 25. $-6z + 8 = -40.6$       |
| 26. $7 = \frac{x}{2} + 5$   | 27. $\frac{y}{3} - 6 = 4$ | 28. $8 + \frac{c}{-4} = 12$ |
| 29. $28 = 7 - \frac{3}{2}t$ | 30. $\frac{3+n}{7} = -5$  | 31. $-10 = \frac{s-8}{-6}$  |



State the first step in solving each equation.

Sample:  $9r = -10 + 7r$

Solution: Subtract  $7r$  from each side.

4.  $2y = 4 - 3y$

5.  $0.5p + 4 = 1.5p$

6.  $\frac{-y - 6}{3} = 7y$

Solve each equation. Check your solution. (Examples 1-5)

7.  $10x = 3x + 14$

8.  $2r - 21 = 3 - 4r$

9.  $8y + 1 = 1 + 8y$

10.  $7 - 6x = 41 - 6x$

11.  $3.4a + 3 = 2a - 4$

12.  $\frac{1}{3}m - 10 = \frac{2}{3}m + 4$

13. **Number Theory** Three times a number  $n$  is 24 less than five times the number. (Example 1)

- Write an equation to represent the problem.
- Find the value of  $n$ .

## Exercises



### Practice

Solve each equation. Check your solution.

14.  $10h = 8h + 6$

15.  $7u - 19 = 6u$

16.  $6x + 2 = 3x - 1$

17.  $5t - 9 = -3t + 7$

18.  $2n + 15 = 2n + 20 - 5$

19.  $3x + 6 = 7x - 4$

20.  $8y - 5 = -y + 2$

21.  $18 + 3k = 22 + 3k$

22.  $12 + 2.5a = 5a$

23.  $a + 3.1 = 6.6 - 4a$

24.  $6.2y + 7 = 3y - 1$

25.  $3.2x - 1.8 = 6 + 11x$

26.  $4.5 - x = 2x - 8.1$

27.  $1.6 - 4.3y = -5.2 - 2.3y$

28.  $\frac{1}{2}d = 2 - \frac{1}{2}d$

29.  $\frac{1}{5}p - 4 = \frac{2}{5}p$

30.  $\frac{1}{3}z - 4 = -\frac{1}{3}z + 18$

31.  $\frac{1}{9}p - 9 = \frac{4}{9}p - 29$