

## Practice 4-8

### ..... *Example Exercises*

#### Example 1

Solve each inequality and graph the solution on a number line.

- |                           |                             |                                |
|---------------------------|-----------------------------|--------------------------------|
| 1. $5 \leq x + 4 < 8$     | 2. $2 > h + 6 > -3$         | 3. $4.4 \leq b - 2.1 \leq 5.9$ |
| 4. $4d > -8$ and $6 > 2d$ | 5. $-2g > -12$ and $3g > 6$ | 6. $-2 < 3x + 4 < 13$          |

#### Example 2

Model each situation with an inequality and solve.

- Javier is on a diet. He is supposed to eat at least 1500 but no more than 1800 calories per day. Before his last meal of the day he has had 1150 calories. What number of calories should Javier eat at his last meal of the day?
- To get an A in class your total points must be between 540 and 600, inclusive. Suppose you have 503 points before the last test. What possible values for the last test will still give you an A in the class?
- The art club is sponsoring an art show. They want the average attendance to be between 100 and 120 inclusive for their four shows. The attendance for the first three shows was 100, 105, and 91. What possible values for the attendance of the fourth show will allow them to reach their goal?

#### Example 3

Solve each inequality and graph the solution on a number line.

- |                                  |                                 |
|----------------------------------|---------------------------------|
| 10. $d + 4 > 15$ or $d - 7 < -3$ | 11. $3f < -12$ or $2f > 6$      |
| 12. $2a + 3 > 11$ or $4a < 12$   | 13. $4h + 6 < 2$ or $-6h < -18$ |
| 14. $b + 4 > 15$ or $5b < 45$    | 15. $5m + 8 > 23$ or $7m < 7$   |

#### Example 4

Express each absolute value inequality as a compound inequality. Solve and graph the solution on a number line.

- |                      |                             |                       |
|----------------------|-----------------------------|-----------------------|
| 16. $ d  > 2$        | 17. $ h  < 6$               | 18. $ 2k  > 8$        |
| 19. $ s + 4  < 2$    | 20. $ 3c - 6  \geq 3$       | 21. $ 2n + 3  \leq 5$ |
| 22. $ 3.8z  > 17.1$  | 23. $ \frac{2}{3}x  \leq 4$ | 24. $9 >  6 + 3t $    |
| 25. $ j  - 2 \geq 6$ | 26. $5 >  v + 2  + 3$       | 27. $ 4y + 11  < 7$   |