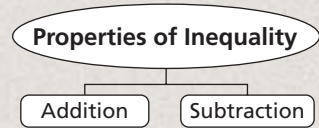


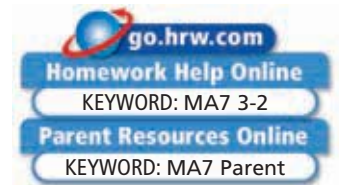
THINK AND DISCUSS

1. Show how to check your solution to Example 1B.
2. Explain how the Addition and Subtraction Properties of Inequality are like the Addition and Subtraction Properties of Equality.
3. **GET ORGANIZED** Copy and complete the graphic organizer. In each box, write an inequality that you must use the specified property to solve. Then solve and graph the inequality.



3-2

Exercises



GUIDED PRACTICE

SEE EXAMPLE 1

p. 176

Solve each inequality and graph the solutions.

1. $12 < p + 6$

2. $w + 3 \geq 4$

3. $-5 + x \leq -20$

4. $z - 2 > -11$

SEE EXAMPLE 2

p. 177

5. **Health** For adults, the maximum safe water temperature in a spa is 104°F . The water temperature in Bill's spa is 102°F . The temperature is increased by $t^{\circ}\text{F}$. Write, solve, and graph an inequality to show the values of t for which the water temperature is still safe.

SEE EXAMPLE 3

p. 178

6. **Consumer Economics** A local restaurant will deliver food to your house if the purchase amount of your order is at least \$25.00. The total for part of your order is \$17.95. Write and solve an inequality to determine how much more you must spend for the restaurant to deliver your order.

PRACTICE AND PROBLEM SOLVING

Independent Practice

For Exercises	See Example
7–10	1
11	2
12	3

Extra Practice

Skills Practice p. S8
Application Practice p. S30

Solve each inequality and graph the solutions.

7. $a - 3 \geq 2$

8. $2.5 > q - 0.8$

9. $-45 + x < -30$

10. $r + \frac{1}{4} \leq \frac{3}{4}$

11. **Engineering** The maximum load for a certain elevator is 2000 pounds. The total weight of the passengers on the elevator is 1400 pounds. A delivery man who weighs 243 pounds enters the elevator with a crate of weight w . Write, solve, and graph an inequality to show the values of w that will not exceed the weight limit of the elevator.
12. **Transportation** The gas tank in Mindy's car holds at most 15 gallons. She has already filled the tank with 7 gallons of gas. She will continue to fill the tank with g gallons more. Write and solve an inequality that shows all values of g that Mindy can add to the car's tank.

Write an inequality to represent each statement. Solve the inequality and graph the solutions.

13. Ten less than a number x is greater than 32.
14. A number n increased by 6 is less than or equal to 4.
15. A number r decreased by 13 is at most 15.