



GUIDED PRACTICE

See Example 1 Solve and graph.

1. $x + 3 < -4$

2. $4 + b \geq 20$

3. $-6 + f < -30$

4. $z - 8 > 13$

5. $2.1 \leq k - 7.2$

6. $x + \frac{1}{3} < 2$

See Example 2 7. A measuring cup can hold no more than 16 fluid ounces of liquid. Rosa pours $6\frac{1}{2}$ fluid ounces of water into the cup. Write and solve an inequality to determine how many additional fluid ounces of water she can add.

8. Paul's car can go at most 375 miles on one tank of gas. Paul fills the tank and then drives 167 miles. Write and solve an inequality to find out how many more miles Paul can drive before he will have to refill the tank.

INDEPENDENT PRACTICE

See Example 1 Solve and graph.

9. $-7 + x \geq 49$

10. $1 < t - 4$

11. $-3 + x \geq 12$

12. $0.6 + y \geq -0.72$

13. $c + 5\frac{1}{3} < 8\frac{2}{3}$

14. $2 < a + (-5)$

See Example 2 15. **Consumer Math** A clothes store gives customers a free gift if they spend at least \$50 in the store. Stacey plans to buy a pair of jeans that cost \$21.75. Write and solve an inequality to show how much more she must spend in order to get the free gift.16. **Consumer Math** Latrell's cell-phone plan allows him to talk for no more than 500 minutes per month. He has already used 288 minutes this month. Write and solve an inequality to determine how many more minutes he can talk on the phone this month.

PRACTICE AND PROBLEM SOLVING

Extra Practice

See page EP7.

Solve and graph.

17. $z - 0.75 > -0.75$

18. $-\frac{2}{7} + x < 3$

19. $7 \leq y + 8.8$

20. $m + (-12) \geq -6$

21. $\frac{4}{5} \geq k - \frac{1}{5}$

22. $-39.5 > -15.5 + g$

You can use *set-builder notation* to write the solution of an inequality. For example, $\{x: x < 5\}$ means the set of all real numbers x such that x is less than 5. Solve each inequality and write the solution using set-builder notation.

23. $x + 12 < -8$

24. $z - 4 \geq -16$

25. $3.5 < b + 7$

26. **Reasoning** When a number is added to -15 , the result is greater than -12 . What are the possible values of the number? Graph them on a number line.