6.1 EXERCISES

HOMEWORK KEY

- = **WORKED-OUT SOLUTIONS** on p. WS1 for Exs. 7, 15, and 33
- = **TAKS PRACTICE AND REASONING** Exs. 34, 35, 38, 40, and 41
- = **MULTIPLE REPRESENTATIONS** Ex. 37

SKILL PRACTICE

1. **VOCABULARY** Copy and complete: To graph $x < -8$, you draw a(n) _?_ circle at -8, and you draw an arrow to the _?_.

2. **WRITING** Are $x + 7 \geq 18$ and $x \geq 25$ equivalent inequalities? *Explain*.

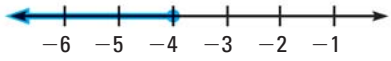
EXAMPLE 1 on p. 356 for Exs. 3–5

WRITING AND GRAPHING INEQUALITIES **Write and graph an inequality that describes the situation.**

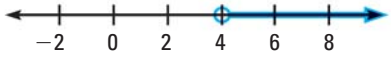
3. The speed limit on a highway is 60 miles per hour.
4. You must be at least 16 years old to go on a field trip.
5. A child must be taller than 48 inches to get on an amusement park ride.

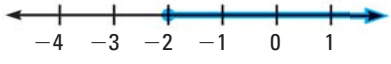
EXAMPLE 2 on p. 356 for Exs. 6–9

WRITING INEQUALITIES **Write an inequality represented by the graph.**

6. 

7. 

8. 

9. 

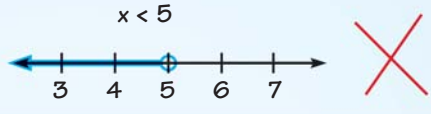
EXAMPLES 3 and 4 on pp. 357–358 for Exs. 10–23

SOLVING INEQUALITIES **Solve the inequality. Graph your solution.**

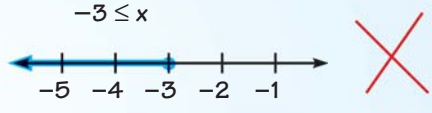
10. $x + 4 < 5$
11. $-8 \leq 8 + y$
12. $-1\frac{1}{4} \leq m + 3$
13. $n + 17 \leq 16\frac{4}{5}$
14. $8.2 + v > -7.6$
15. $w + 14.9 > -2.7$
16. $r - 4 < -5$
17. $1 \leq s - 8$
18. $-1\frac{1}{3} \leq p - 8\frac{1}{3}$
19. $q - 1\frac{1}{3} > -2\frac{1}{2}$
20. $2.1 \geq c - 6.7$
21. $d - 1.92 > -8.76$

ERROR ANALYSIS ***Describe*** **and correct the error in solving the inequality or in graphing the solution.**

22.
$$x + 8 < -3$$
$$x + 8 - 8 < -3 + 8$$
$$x < 5$$



23.
$$-17 \leq x - 14$$
$$-17 + 14 \leq x - 14 + 14$$
$$-3 \leq x$$



TRANSLATING SENTENCES **Write the verbal sentence as an inequality. Then solve the inequality and graph your solution.**

24. The sum of 11 and m is greater than -23.
25. The difference of n and 15 is less than or equal to 37.
26. The difference of c and 13 is less than -19.