5-6 Additional Practice

Leveled Practice For **1–4**, solve each inequality.

1. $3 + 4x > 27$

First, subtract ⬚ from both sides.

Then ⬚ both sides by 4.

$x >$ ⬚

2. $3.5 + 4t \leq 39.5$

3. $12 - 3y < 27$

4. $8 - \frac{1}{4}n \geq 20$

5. a. Solve: $\frac{1}{2}x + 8 \leq 10$

b. Solve: $-3x - 24 \leq -36$

c. Which of the following correctly compares the solutions of the inequalities above?

Ⓐ The inequalities have no common solutions.

Ⓑ The inequalities have only one common solution.

Ⓒ The inequalities have the same solutions.

Ⓓ The inequalities have one uncommon solution.

6. **Make Sense and Persevere** Amelia can spend no more than $89 to rent a car for a day trip. A rental car costs $35 per day plus $0.20 per mile. Write and solve an inequality to find the possible distance in miles, m, that Amelia can drive without exceeding her budget. ©MP.1

7. **a.** Solve: $9x - 4 > 95$

   b. Solve: $4x + 10 > 54$

   c. Which of the following correctly compares the solutions of the inequalities above?

   Ⓐ The inequalities have the same solutions.

   Ⓑ The inequalities have only one common solution.

   Ⓒ The inequalities have one uncommon solution.

   Ⓓ The inequalities have no common solutions.

8. **Higher Order Thinking** The inequalities $\frac{1}{5}x + 7 \le 11$ and $-\frac{1}{5}x - 7 \ge -11$ have the same solutions.

   a. What are the solutions for both inequalities?

   b. Without performing any calculations, how can you tell that the inequalities will have the same solutions?

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9. Which represents the solution of the following inequality statement?

   6 times a number plus 22 is greater than 7.

   Ⓐ $x \ge \frac{5}{2}$

   Ⓑ $x \le -\frac{5}{2}$

   Ⓒ $x > -\frac{5}{2}$

   Ⓓ $x < \frac{5}{2}$