

# 2.16

## Solving a Linear Inequality: Problem Type 3

### • Example 1

Solve the inequality  $2 - 5x < 7$ .

$$2 - 5x < 7$$

$$2 - 2 - 5x < 7 - 2 \quad \text{Subtract 2.}$$

$$-5x < 5$$

$$\frac{-5x}{-5} > \frac{5}{-5}$$

Divide by  $-5$ . Be sure to reverse the sense of the inequality.

or  $x > -1$

### ● ● ● CHECK YOURSELF 1

Solve the inequality.

$$4x - 9 \geq 5x$$

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### ● ● ● CHECK YOURSELF ANSWER

1.  $x \geq -9$ .

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# 2.16 Exercises

Name \_\_\_\_\_

Section \_\_\_\_\_

Date \_\_\_\_\_

## A N S W E R S

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

11. \_\_\_\_\_

12. \_\_\_\_\_

Solve the following inequalities.

1.  $-6x \geq 18$

2.  $-9x < 45$

3.  $-10x < -60$

4.  $-12x \geq -48$

5.  $-12x < 36$

6.  $4 - 3x > 8$

7.  $5 - 3x > 17$

8.  $8 - 9x \leq 53$

9.  $14 - 3x \geq 59$

10.  $26 - 4x > -10$

11.  $49 - 7x \leq 14$

12.  $46 - 6x \geq 28$