

NAME \_\_\_\_\_

DATE \_\_\_\_\_

**Module 5** Solving Linear Inequalities of One Variable

**Lesson 1** Solving Linear Inequalities by Inspection

# independent practice

Graph each inequality on a number line.

1.  $M \geq -3$



2.  $M \leq -3$



3.  $x < 8$



4.  $x > 8$



5.  $T > 0$



6.  $T \leq 0$



7.  $-5 < r$



8.  $r > -5$



9.  $y \leq -4$



10.  $-4 \geq y$



Solve the following inequalities by inspection. Then graph each solution on a number line.

11.  $w + 5 \geq 8$  \_\_\_\_\_



12.  $4 - d < 10$  \_\_\_\_\_



13.  $P - 10 \leq -17$  \_\_\_\_\_



14.  $K + 8 > 8$  \_\_\_\_\_



15.  $7c \geq -35$  \_\_\_\_\_



16.  $12A < 84$  \_\_\_\_\_



17.  $\frac{x}{4} \leq 0$  \_\_\_\_\_



18.  $\frac{N}{3} > 0$  \_\_\_\_\_



Determine if the given number is a solution to the inequality. Explain your answer.

19.  $m = -8$  for  $-\frac{40}{m} \leq 4$  \_\_\_\_\_

\_\_\_\_\_

20.  $R = 4$  for  $-\frac{R}{2} \geq -10$  \_\_\_\_\_

\_\_\_\_\_

## Journal

1. Explain why there may be more than one value, for a given inequality, which makes the statement true.
2. Describe how you would draw the solution to the inequality  $x \geq 4$ .
3. Describe how you would draw the solution to the inequality  $x < -6$ .
4. If you were comparing two objects, what words or phrases could you use to mean "greater than" or "less than"?
5. Explain how to solve inequalities by inspection.

### Cumulative Review

Identify all the sets of numbers to which each of the following belong.

- |              |            |                          |                      |
|--------------|------------|--------------------------|----------------------|
| 1. -15 _____ | 2. 7 _____ | 3. $-2\frac{3}{5}$ _____ | 4. $\sqrt{17}$ _____ |
| _____        | _____      | _____                    | _____                |
| _____        | _____      | _____                    | _____                |
| _____        | _____      | _____                    | _____                |

If possible, give an example of a number that is:

- |   |  |
|---|--|
| 5. a whole number, but not a natural number.<br>_____ | 6. both a whole number and an irrational number.<br>_____    |
| 7. both a natural number and an integer.<br>_____     | 8. both an integer and a rational number.<br>_____           |
| 9. both a natural number and a real number.<br>_____  | 10. both a natural number and an irrational number.<br>_____ |



