#### **Skills Practice** 5 - 4

# Solving Compound Inequalities

Graph the solution set of each compound inequality.

**1.** b > 3 or  $b \le 0$ **2.** z < 3 and z > -2-4 -3 -2 -1 0 1 -4 -3 -2 -1 0 1 2 3 4 2 3 4 **3.** k > 1 and k > 5**4.** y < -1 or  $y \ge 1$ <u>-4 -3 -2 -1 0 1 2 3 4</u> 0 1 2 3 4 5 6 7 8

### Write a compound inequality for each graph.

### Solve each compound inequality. Then graph the solution set.

<b>9.</b> $m + 3 \ge 5$ and $m + 3 < 7$	<b>10.</b> $y - 5 < -4$ or $y - 5 \ge 1$
-2 -1 0 1 2 3 4 5 6	-2 -1 0 1 2 3 4 5 6
<b>11.</b> $4 < f + 6$ and $f + 6 < 5$	<b>12.</b> $w + 3 \le 0$ or $w + 7 \ge 9$
$-4 - 3 - 2 - 1 \ 0 \ 1 \ 2 \ 3 \ 4$ <b>13.</b> $-6 < b - 4 < 2$	$-4 - 3 - 2 - 1 \ 0 \ 1 \ 2 \ 3 \ 4$ <b>14.</b> $p - 2 \le -2 \text{ or } p - 2 > 1$
-2 -1 0 1 2 3 4 5 6	-4 -3 -2 -1 0 1 2 3 4

## Define a variable, write an inequality, and solve each problem. Check your solution.

15. A number plus one is greater than negative five and less than three.

16. A number decreased by two is at most four or at least nine.

**17.** The sum of a number and three is no more than eight or is more than twelve.

Lesson 5-4