## 2-3 **Practice**

Absolute Value Inequalities

**Solve each inequality. Graph the solution.**

**1.** $2|x+5| \leq 8$

To start, divide each side by 2.        $|x+5| \leq 4$

$x + 5$ is greater than or equal to $-4$ and less than or equal to 4.     $-4 \leq x + 5 \leq 4$

**2.** $|x+1| - 3 \leq 1$                  **3.** $|2z+2| - 1 > 3$

**4.** $2|w+3| - 1 < 1$               **5.** $|y-3| + 2 \geq 4$

**6.** $|2t + 2| + 5 \leq 9$              **7.** $|2s + 1| > 3$

**Write each compound inequality as an absolute value inequality.**

**8.** $1.2 \leq a \leq 2.4$

To start, find the tolerance.             $\dfrac{2.4 - 1.2}{2} = \dfrac{1.2}{2} = 0.6$

**9.** $-2 < x < 4$                    **10.** $1 \leq m \leq 2$

**11.** $20 \leq y \leq 30$              **12.** $-3 < t < 17$

**Write an absolute value inequality to represent each situation.**

**13.** In order to enter the kiddie rides at the amusement park, a child must be between the ages of 4 and 10. Let $a$ represent the age of a child who may go on the kiddie rides.

**14.** The outdoor temperature ranged between 42°F and 60°F in a 24-hour period. Let $t$ represent the temperature during this time period.