

**LESSON**  
**5.6****Practice A***For use with the lesson "Solve Absolute Value Inequalities"***Determine whether the given value is a solution of the inequality.**

1.  $4|x - 5| + 6 < 14; 10$

2.  $2|x + 6| - 4 \geq 4; -2$

3.  $-|x + 6| + 8 < 0; 2$

4.  $3|x + 2| - 2 > 7; x = -3$

5.  $-|x - 4| + 8 > 1; x = 10$

6.  $2|x - 7| - 9 \geq 5; x = -1$

7.  $-2|x + 1| + 4 \leq 8; x = -5$

8.  $|3x + 6| - 10 < 3; x = -6$

9.  $-|3 - 2x| + 4 > 0; x = -1$

**Match the inequality with an equivalent inequality.**

10.  $|x| - 3 < 1$

11.  $|x - 3| > 1$

12.  $|x - 3| < 1$

A.  $x > 4$  or  $x < 2$

B.  $x < 4$  and  $x > 2$

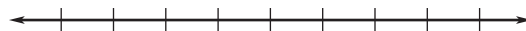
C.  $x < 4$  and  $x > -4$

**Solve the inequality. Graph your solution.**

13.  $|x| \leq 5$



14.  $|x| > 1$



15.  $|x| \geq 0.5$



16.  $|x| \geq \frac{1}{4}$



17.  $|x| < 2.4$



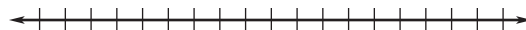
18.  $|x| \leq 2.25$



19.  $|x + 1| > 2$



20.  $|x - 3| \leq 5$



21.  $|x + 5| \geq 1$



22.  $|2x + 3| \leq 4$



**LESSON**  
**5.6**
**Practice A** *continued*  
*For use with the lesson "Solve Absolute Value Inequalities"*
**Match the inequality with the description.**

- |  |                            |
|--|----------------------------|
| <b>23.</b> The distance between $x$ and 2 is less than or equal to 4.    | <b>A.</b> $ x - 4  \leq 2$ |
| <b>24.</b> The distance between $x$ and 4 is less than or equal to 2.    | <b>B.</b> $ x - 2  \leq 4$ |
| <b>25.</b> The distance between $x$ and 4 is greater than or equal to 4. | <b>C.</b> $ x - 2  \geq 2$ |
| <b>26.</b> The distance between $x$ and 2 is greater than or equal to 2. | <b>D.</b> $ x - 4  \geq 4$ |

**Write the verbal sentence as an inequality. Then solve the inequality and graph your solution.**

- 27.** The distance between  $x$  and 3 is greater than 5.



- 28.** The distance between  $x$  and  $-2$  is less than 7.



- 29.** The distance between  $x$  and 4 is less than or equal to 2.



- 30.** The distance between  $x$  and  $-6$  is greater than or equal to 1.



- 31.** The distance between  $x$  and  $-7$  is less than 2.



- 32. Body Temperature** An adult's body temperature is considered to be normal if it is  $98.6^{\circ}\text{F}$  with an absolute deviation of  $1^{\circ}\text{F}$ .
- Write an absolute value inequality that represents the normal temperature range.
  - Solve the inequality. What is the temperature range?
- 33. Car Mileage** Your car averages 32 miles per gallon on the highway. The actual mileage varies from the average by 5 miles per gallon.
- Write an absolute value inequality that represents the mileage range of your car.
  - Solve the inequality. What is the mileage range?