

**6.4 Exercises**



# Vocabulary and Concept Check

1. **VOCABULARY** Explain how to find the absolute value of an integer.

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2. **REASONING** Which integer is greater,  $-50$  or  $25$ ? Which has the greater absolute value? Explain.

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3. **DIFFERENT WORDS, SAME QUESTION** Which is different? Find “both” answers.

How far is  $-3$  from  $0$ ?

What integer is 3 units to the left of  $0$ ?

What is the absolute value of  $-3$ ?

What is the distance between  $-3$  and  $0$ ?

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## Practice and Problem Solving

Use a vertical number line to graph the location of each object. Then tell which object is farther from sea level.

4. Scuba diver:  $-15$  m  
Dolphin:  $-22$  m

Farther from sea level: \_\_\_\_\_

Find the absolute value.

12.  $|11|$  \_\_\_\_\_

14.  $|-68|$  \_\_\_\_\_

16. **ERROR ANALYSIS** Describe and correct the error in finding the absolute value.



$$|14| = -14$$

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Copy and complete the statement using  $<$ ,  $>$ , or  $=$ .

18.  $|-3|$   3

20.  $\frac{3}{4}$    $|\frac{2}{5}|$

Order the values from least to greatest.

28.  $|-3|$ ,  $|5|$ ,  $-3$ ,  $-4$ ,  $|-4|$  \_\_\_\_\_

Simplify the expression.

32.  $-|6|$  \_\_\_\_\_

Tell whether the statement is *always*, *sometimes*, or *never* true. Explain.

36. The absolute value of a negative number is positive. \_\_\_\_\_
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**38. PALINDROME** A *palindrome* is a word or sentence that reads the same forward as it does backward.

- a. Graph and label the following points on a number line:  $A = -2$ ,  $C = -1$ ,  $E = 0$ ,  $R = -3$ . Then graph and label the absolute value of each point on the *same* number line.
- b. What word do the letters spell? Is this a palindrome?
- c. Make up your own palindrome.

a.

b.

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c.

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### Fair Game Review

What you learned in previous grades & lessons

Draw the polygon with the given vertices in a coordinate plane. (Section 4.4)

40.  $A(1, 1)$ ,  $B(3, 5)$ ,  $C(5, 0)$

41.  $D(0, 6)$ ,  $E(2, 1)$ ,  $F(6, 3)$

42.  $P(2, 1)$ ,  $Q(4, 4)$ ,  $R(8, 4)$ ,  $S(6, 1)$

43.  $W(1, 6)$ ,  $X(9, 6)$ ,  $Y(9, 1)$ ,  $Z(4, 1)$

44. **MULTIPLE CHOICE** Which expression represents “6 less than the product of 4 and a number  $x$ ”? (Section 3.2)

(A)  $(6 - 4)x$

(B)  $6 - 4x$

(C)  $\frac{6}{4x}$

(D)  $4x - 6$



