

## 6.4 Multiplying Integers

### Key Concept

**Same Signs:** The product of two integers with the same sign is **positive**.

#### Examples

$$4 \cdot 2 = 8$$

$$-4 \cdot -2 = 8$$

**Different Signs:** The product of two integers with different signs is **negative**.

$$4 \cdot -2 = -8$$

$$-4 \cdot 2 = -8$$

**Zero:** The product of an integer and 0 is 0.

$$4 \cdot 0 = 0$$

$$-4 \cdot 0 = 0$$

**Find the product.**

1.  $4(15)$

2.  $8(-6)$

3.  $-24(-3)$

4.  $-17(0)$

5.  $-3(2)(5)$

6.  $-2(-5)(4)$

**Complete the statement using  $<$ ,  $>$ , or  $=$ .**

7.  $17(-3) \underline{\quad ? \quad} 25(-2)$

8.  $-18(-2) \underline{\quad ? \quad} 7(5)$

**Evaluate the expression.**

9.  $-3(6) + 4$

10.  $-5(-4) + 8$

11. The record low temperature in Louisiana is  $-16^{\circ}\text{F}$ . The record low temperature in Maine is three times lower than the record low in Louisiana. What is the record low temperature in Maine?

## 6.5 Dividing Integers

### Key Concept

**Same Signs:** The quotient of two integers with the same sign is **positive**.

### Examples

$$10 \div 2 = 5$$

$$-10 \div -2 = 5$$

**Different Signs:** The quotient of two integers with different signs is **negative**.

$$-10 \div 2 = -5$$

$$10 \div -2 = -5$$

**Zero:** The quotient of 0 and any other nonzero is 0.

$$0 \div 2 = 0$$

$$0 \div -2 = 0$$

**Find the quotient.**

1.  $-66 \div 11$

2.  $72 \div (-3)$

3.  $-96 \div (-12)$

4.  $80 \div (-20)$

5.  $-125 \div (-5)$

6.  $0 \div (-23)$

**Complete the statement using  $<$ ,  $>$ , or  $=$ .**

7.  $15 \div (-3) \underline{\quad ? \quad} 15 \div 3$

8.  $42 \div (-6) \div (-1) \underline{\quad ? \quad} 7$

9. The gains and losses in the worth of a share of stock over a 5-day period are \$6, \$2, -\$1, -\$3, and \$1. Find the mean change in worth of the stock over the 5-day period.