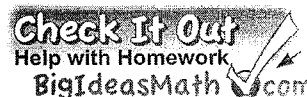


# 1.4 Exercises

# Answer Key



## Vocabulary and Concept Check

- WRITING** What can you conclude about the signs of two integers whose product is (a) positive and (b) negative?
- OPEN-ENDED** Write two integers whose product is negative.

Tell whether the product is *positive* or *negative* without multiplying. Explain your reasoning.

3.  $4(-8)$                       4.  $-5(-7)$                       5.  $-3 \cdot 12$

Tell whether the statement is *true* or *false*. Explain your reasoning.

- The product of three positive integers is positive.
- The product of three negative integers is positive.

## Practice and Problem Solving

Multiply.

- |                      |                      |                        |                         |
|----------------------|----------------------|------------------------|-------------------------|
| ① ② 8. $6 \cdot 4$   | 9. $7(-3)$           | 10. $-2(8)$            | 11. $-3(-4)$            |
| ⑫ $-6 \cdot 7 = -42$ | ⑬ $3 \cdot 9 = 27$   | ⑭ $8 \cdot (-5) = -40$ | ⑮ $-1 \cdot (-12) = 12$ |
| ⑯ $-5(10) = -50$     | ⑰ $-13(0) = 0$       | ⑱ $-9 \cdot 9 = -81$   | ⑲ $15(-2) = -30$        |
| 20. $-10 \cdot 11$   | 21. $-6 \cdot (-13)$ | 22. $7(-14)$           | 23. $-11 \cdot (-11)$   |

- JOGGING** You burn 10 calories each minute you jog. What integer represents the change in your calories after you jog for 20 minutes?
- WETLANDS** About 60,000 acres of wetlands are lost each year in the United States. What integer represents the change in wetlands after 4 years?

Multiply.

- |                               |                             |                             |
|-------------------------------|-----------------------------|-----------------------------|
| 26. $3 \cdot (-8) \cdot (-2)$ | 27. $6(-9)(-1)$             | 28. $-3(-5)(-4)$            |
| 29. $(-5)(-7)(-20)$           | 30. $-6 \cdot 3 \cdot (-2)$ | 31. $3 \cdot (-12) \cdot 0$ |

Evaluate the expression.

- |                              |                                     |   |
|------------------------------|-------------------------------------|---|
| ⑧ ⑩ ⑫ $(-4)^2 (-4)(-4) = 16$ | ⑬ $(-1)^3 (-1)(-1)(-1) = -1$        | ⑭ $-8^2 - 8 \cdot 8 = -64$                                |
| ⑮ $-6^2 - 6 \cdot 6 = -36$   | ⑯ $-5^2 \cdot 4 - 5 \cdot 4 = -100$ | ⑰ $-2 \cdot (-3)^3 - 2 \cdot (-3)(-3)(-3) = -2(-27) = 54$ |

**ERROR ANALYSIS** Describe and correct the error in evaluating the expression.

38.

~~$-2(-7) = -14$~~

39.

~~$-10^2 = 100$~~