

# 7.14

## Multiplication of Monomials

### • Example 1

Multiply  $3x^2y$  and  $2x^3y^5$ .

Write

$$\begin{aligned} & (3x^2y)(2x^3y^5) \\ &= \underbrace{(3 \cdot 2)}_{\substack{\text{Multiply} \\ \text{the coefficients.}}}(x^2 \cdot x^3)\underbrace{(y \cdot y^5)}_{\substack{\text{Add the exponents.}}} \\ &= 6x^5y^6 \end{aligned}$$

### ● ● ● CHECK YOURSELF 1

Multiply.

a.  $(5a^2b)(3a^2b^4)$

b.  $(-3xy)(4x^3y^5)$

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### ● ● ● CHECK YOURSELF ANSWER

1. (a)  $15a^4b^5$ ; (b)  $-12x^4y^6$ .

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# 7.14 Exercises

Name \_\_\_\_\_

Section \_\_\_\_\_

Date \_\_\_\_\_

## A N S W E R S

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_
11. \_\_\_\_\_
12. \_\_\_\_\_

Multiply.

- |                         |                            |
|-------------------------|----------------------------|
| 1. $(5x^2)(3x^3)$       | 2. $(7a^5)(4a^6)$          |
| 3. $(-2b^2)(14b^8)$     | 4. $(14y^4)(-4y^6)$        |
| 5. $(-10p^6)(-4p^7)$    | 6. $(-6m^8)(9m^7)$         |
| 7. $(4m^5)(-3m)$        | 8. $(-5r^7)(-3r)$          |
| 9. $(4x^3y^2)(8x^2y)$   | 10. $(-3r^4s^2)(-7r^2s^5)$ |
| 11. $(-3m^5n^2)(2m^4n)$ | 12. $(7a^3b^5)(-6a^4b)$    |