

5.2

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

● ● ● CHECK YOURSELF ANSWER

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

5.2 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. $(7a^3b^5)(-6a^4b)$