

Multiplication of Monomials

• Example 1

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

Write

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

● ● ● CHECK YOURSELF 1

Multiply.

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

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

● ● ● CHECK YOURSELF ANSWER

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

6.2 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. $(7a^3b^5)(-6a^4b)$ |