

Multiplying Monomials: The
Product and Power Rules

1. Simplify each expression

$$x^5 \cdot x^2$$

2. Simplify each expression

$$y^8 \cdot y$$

3. Simplify each expression

$$(-x)(-x)^3$$

4. Simplify each expression

$$(2^3)^2$$

5. Simplify each expression

$$[(-x)^3]^5$$

6. Simplify each expression

$$(k^4)^5$$

7. Simplify each expression

$$(3y^5)^2$$

8. Simplify each expression

$$\left(\frac{3}{5}x^3\right)^2$$

9. Simplify each expression

$$(-3m^4n^5)^4$$

10. Simplify each expression

$$(-2xy^4)^3$$

11. Simplify each expression

$$(3y^4)(5y^{10})$$

12. Simplify each expression

$$(2a^3b^{10})(3ab^7)$$

13. Simplify each expression

$$\left(\frac{3}{4}x\right)(-12x^3y)\left(\frac{-2}{9}x\right)$$