

MULTIPLYING MONOMIALS

To multiply monomials, use the **PRODUCT RULE**:

$$x^a \cdot x^b =$$

Directions: Find each product.

17. $x^2 \cdot x^3$

18. $a^9 \cdot a$

19. $w^7 \cdot w^4$

➤ **Examples with Coefficients:**

- MULTIPLY the coefficients.
- SIMPLIFY the variables with the product rule.

20. $(4x^2) \cdot (3x^5)$

21. $(3x^6)(5x^2)$

22. $5x^2 \cdot 6x^4$

23. $(-4a^3b)(3a^2b^5)$

24. $-7p^9q^3r \cdot -4p^2q^6r^4$

25. $(8x^4y^2)(-3x^4y^9)$

26. $2y \cdot -5y^2 \cdot 3y^3$

27. $(ab)(6a^5b)(-ab)$

28. $-2xy \cdot xy \cdot 3x^2y^3$

29. $6m \cdot 7m^2n \cdot n^4$

30. $(8c^2d)(10c^3d^5)$

31. $-4(rs^2)(-5r^4s)$

32. $(-6a^2b) \cdot \left(\frac{1}{2}ab\right)$

33. $12y \cdot \left(\frac{2}{3}xy^4\right)$

34. $\frac{1}{4}(8mn)(-6m^2n^2)$

MIXED PRACTICE

35. $(2x^5y^2)(4xy^3) + (x^4y^4)(3x^2y)$

36. $(4a^3b^4)(5ab^2) + (a^2b^5)(-2a^2b)$

37. $19m^8n^8 - (4m^5n)(3m^3n^7)$

38. $(-5cd)(-3c^4d) - (7c^2d^2)(2c^3)$