

Multiplication Property of Exponents

$$x^7 = x \cdot x \cdot x \cdot x \cdot x \cdot x \cdot x$$

$$(x + 4)^3 = (x + 4)(x + 4)(x + 4)$$

$$\begin{array}{c} B^n \\ \uparrow \quad \swarrow \\ \text{Base} \quad \text{exponent} \end{array}$$

Multiplicative Property

$$B^n = B^{n+m}$$

$$11^4 \cdot 11^3 = 11^7$$

$$4^2 \cdot 4^{-5} = 4^{-3} = \frac{1}{4^3}$$

Examples

$$2n^5 \cdot 3n^{-2} = 6n^3$$

$$5^{-2} \cdot 5^2 = 5^0 = 1$$

$$2y^3 \cdot 7x^2 \cdot 2y^4 = 28y^7x^2$$

$$(7 \times 10^2)(4 \times 10^4) = (7 \cdot 4) \times 10^{2+4} = 28 \times 10^6$$

Homework Pg 433 #1-5 odd, 7-21, 23-27
odd