exponents

x^3 — 3 exponent, x base

$x^3 \Rightarrow (x^1)(x^1)(x^1)$ ← same base →

x^{1+1+1}

when multiplying add exponents of same bases!

$x =$

$y =$

$y = 2x$

$x^3 \cdot x^1 = x^4$

expand

$(x)(x)(x) \cdot (x)$

x^4

shortcut

x^{3+1}

x^4

$$x^3 \cdot x^2 \cdot x^9$$

$$x^{3+2+9}$$

$$x^{14}$$

$2x^3 \cdot 3x^5$

$(2 \cdot 3)x^{3+5}$

$6x^8$

$2x^3$ is $2 \cdot x \cdot x \cdot x$

$(2x)^3$ is $(2x)(2x)(2x)$

$13x \cdot 2y^3 \cdot y^4 \cdot x^7$

$x^0 = 1$

$999{,}999^0 = 1$

$(13 \cdot 2)(x^1 \cdot x^7)(y^3 \cdot y^4)$

$26x^{1+7}y^{3+4}$

$26x^8y^7$

$13 \cdot x^1 \cdot 2 \cdot y^3 \cdot y^4 \cdot x^7$