

Exponent rules

i) when you multiply common variables add their exponents

$$\text{example: } (2x^2)(5x^3) = 10x^{(2+3)} = 10x^5$$

ii) when you divide common variables subtract their exponents

$$\text{example: } (8x^6) / (4x^3) = 2x^{(6-3)} = 2x^3$$

iii) any variable or number raised to the zero (0) is one

$$\text{example: } (2x^2)^0 = 1$$

iv) when you have a power raised to a power multiply the exponents

$$\text{example: } (2x^3)^2 = 4x^{(3 \times 2)} = 4x^6$$