

When may the exponents combine?

Read the operation, base and brackets before choosing a law.

PRODUCT · SAME NON-ZERO BASE

$$a^m \times a^n = a^{(m+n)}$$

$$2^3 \times 2^4 = 2^7 = 128 \text{ model strings.}$$

A sum is different: $2^3 + 2^4 = 24$.

QUOTIENT · DENOMINATOR NOT ZERO

$$a^m / a^n = a^{(m-n)}, \text{ if } a \text{ is not } 0$$

$$3^5 / 3^2 = 3^3 = 27 \text{ groups.}$$

POWER OF A POWER · GROUPS REPEAT

$$(a^m)^n = a^{(m \times n)}$$

$$(2^3)^2 = 2^6 = 64 \text{ pairs.}$$

YOUR JUSTIFICATION

Same base? Which operation? Source unit?

Different bases or a plus sign need a different method.