(Unit 2.3)

ORDER OF OPERATIONS
→ with Exponents

- Recall that

BRACKETS
Exponent
Division
Multiplication
Addition
Subtraction

is the order of operation we have been using for some time now

So → "E" is the exponent.

IMPORTANT: • Any time there is more than one operation you must use

BEDMAS

• In this part of the unit you can work with powers of different bases

BUT

they can not combined.

Let's look at the examples in your book:

EJEMPLO:

$3^2 + 2^3$

$\downarrow \quad \downarrow$

$3 \times 3 \quad 2 \times 2 \times 2$

$\downarrow \quad \downarrow$

$9 + 8 = 17$

$(5+2)^4$

$\downarrow$

$(7)^4$

$\downarrow$

$7 \times 7 \times 7 \times 7 = 2{,}401$

$[2 \times (-3)^3 - 6]^2$ Bedmas

1. Brackets → inside → 1. Exponent $(-3)^3 = (-3)(-3)(-3) = -27$ Neg.

$[2 \times (-27) - 6]^2$

2. Multiplication is next → $2 \times (-27) = -54$

3. Finally $[-54 - 6]^2 = (-60)^2$

$\Downarrow$

3600

Remember:

$x^0 = 1$

$x^1 = x$

$(-x)$ Base that's negative

$-x$ Base is positive but Result is negative