Introduction to Algebra: Vocabulary

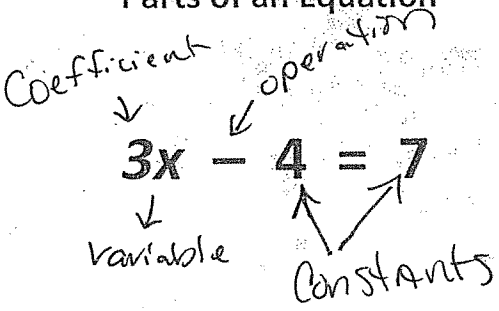
Equation: a math sentence that states two quantities are equal.

It will have an equal sign =.

$$3x - 4 = 7$$

The equation says: what is on the left (3x - 4) is equal to what is on the right (7).

Parts of an Equation



- **Variable:** a letter that represents a number we do not know yet.

!!! Every variable has a coefficient

- **Coefficient:** the number before the variable. Can be positive or negative.

- **Constant:** a number with no variable attached.

- **Term** – any of the following:
  - single number (constant)
  - single variable
  - the product of a number (coefficient) and variable(s).

What coefficient does this variable have?

$2k + 15 - m - 3 + n - 7p$ (+-m, +-3, +7p)

Terms: 2k, 15, -m, -3, n, -7p

Variables: k, m, n, p

Coefficients: 2, -1, 1, -7

Constants: 15, -3

$-8 - 4c + 7 - c - 12c - 2$ (+-4c, +-c, +-12c, +-2)

Terms: -8, -4c, 7, -c, -12c, -2

Variables: c

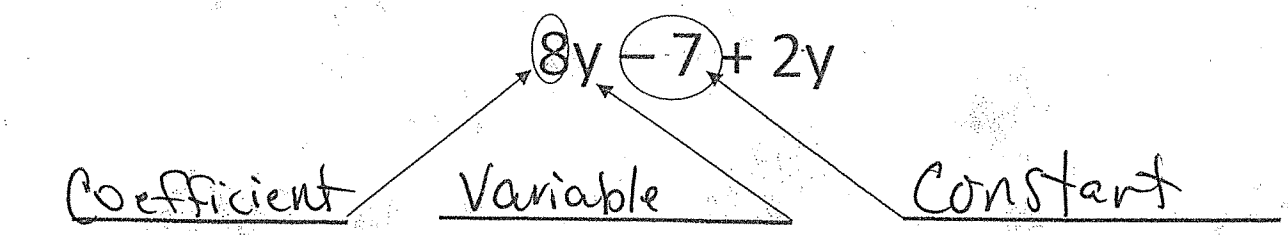
Coefficients: -4, -1, -12

Constants: -8, 7, -2

- **EXPRESSION:** a group of terms. Contains numbers, operations, and variables.
  DOES NOT contain an equal sign =.

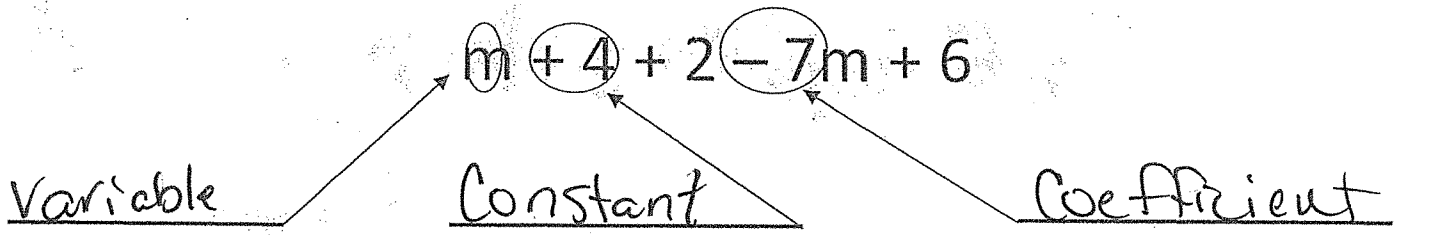
Label the parts of the expression: *Coefficient, Constant, Variable*

1.



How many TERMS are present in this expression? 3 **List them:** 8y, −7, 2y

2.



How many TERMS are present in this expression? 5 **List them:** m, 4, 2, −7m, 6

Identify the terms, variables, coefficients, and constants in each expression.

3. $-4a - 7b + 5 + c$ (+ −7b)

Terms: −4a, −7b, 5, c

Variables: a, b, c

Coefficients: −4, −7, 1

Constants: 5

4. $7 - 5h - 2 - k$ (+ −5h + −2 + −K)

Terms: 7, −5h, −2, −K

Variables: h, K

Coefficients: −5, −1

Constants: 7, −2

5. $5 - 4x - 8y$ (+ −4x + −8y)

Terms: 5, −4x, −8y

Variables: x, y

Coefficients: −4, −8

Constants: 5

6. $9k + 7 - k + 4$ (+ −k)

Terms: 9K, 7, −K, 4

Variables: K

Coefficients: 9, −1

Constants: 7, 4