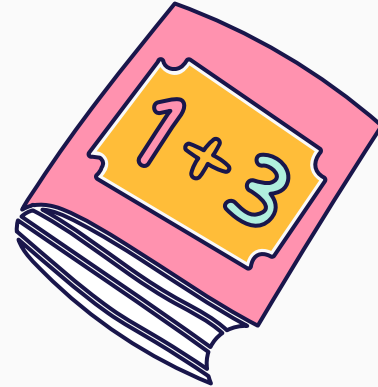
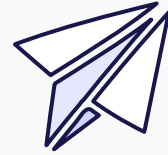


ELEMENTARY MATH

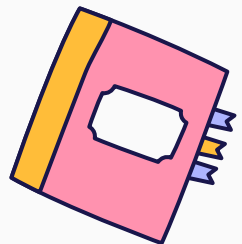
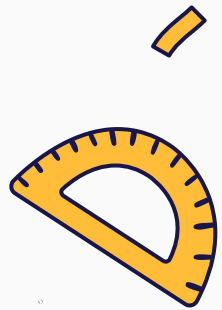
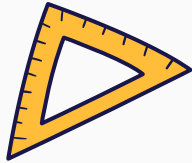
EQUATIONS I

$$2 + 2$$

IMMY TREE



What's an
equation?



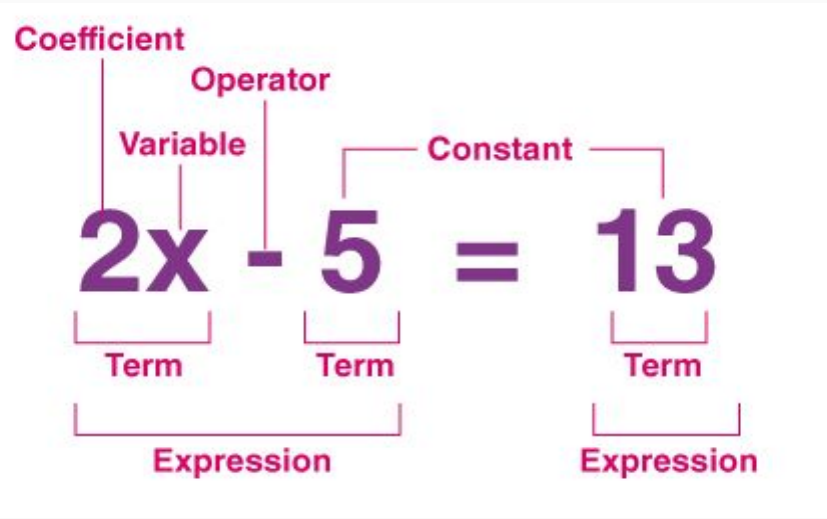


01

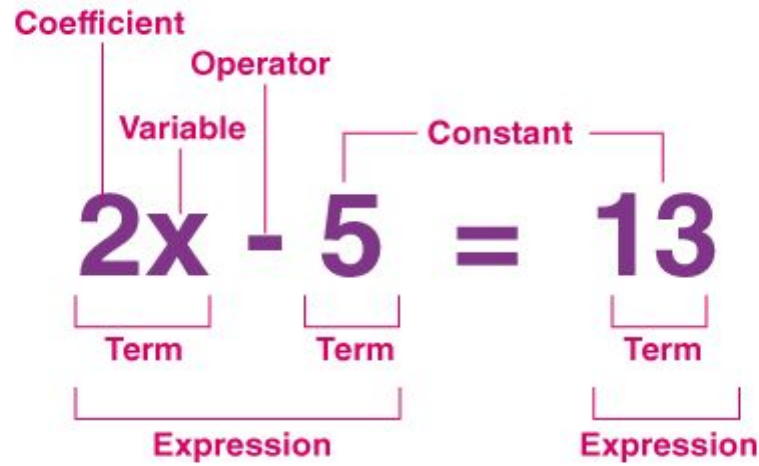
Composition of equation



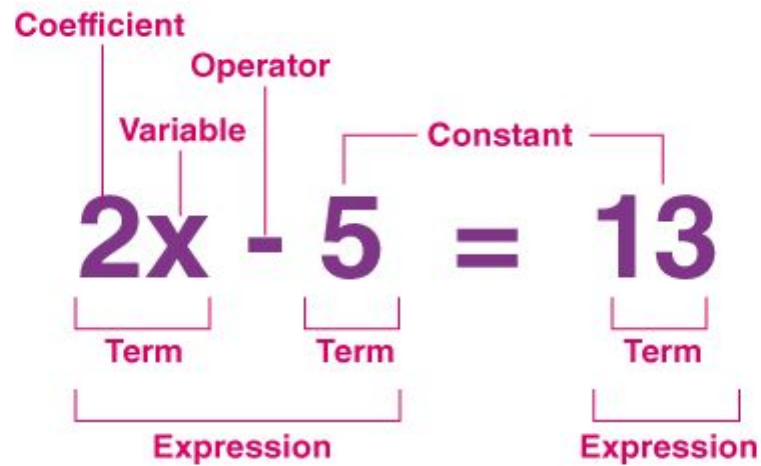
$$2+2$$

An equation has two expressions separated by an equal sign (=)



X is a variable, which means we don't now what number is X, and we have to solve for x based on the equation.



In math, when you see "2x," it means "2 times x." We don't write the multiplication sign between the number and the variable, but it still means multiplication.



Examples:

$$2 \text{ times } X = 2X$$

$$2 \text{ times } Y = 2Y$$

$$2 \text{ times } A = 2A$$

$$3 \text{ times } B = 3B$$



Algebra Variables

$$5 + X = 14$$



02

Solving Equations



$$2 + 2$$

Steps to Solve:

Isolate the Variable: To isolate the variable means to get it alone on one side of the equation.

For example, for equation:

$$3x + 5 = 11$$

isolating the variable x means making x the subject of the equation by performing operations to get it alone on one side, like " $3x = 11 - 5$."

Steps to Solve:

Undo Operations: "Undoing" means doing the opposite. If we added something, we can take it away. If we multiplied, we can divide.

For example:

$$y - 7 = 3$$

The variable "y" is on the left side of the equation. To undo the subtraction of 7, we add 7 to both sides of the equation to find "y."

$$y - 7 + 7 = 3 + 7$$

$$y = 3 + 7$$

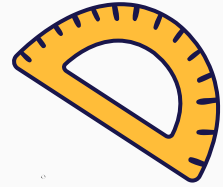
$$y = 10$$

Keep it Balanced: We want both sides to stay level or equal.

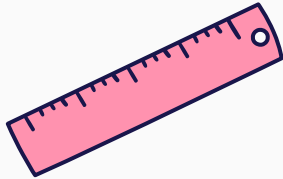
Whatever we do on one side, we must do the same on the other so that both sides stay fair and equal.

It's like a balance. If we place an apple on one side, to keep the balance equal, we need to put another apple on the other side as well.





TAKE A TRY !



TAKE A TRY !

$$\text{acorn} + 2 = 7$$

$$\text{acorn} - 1 = \text{mushroom}$$

$$\text{mushroom} + 8 = \text{nut}$$

$$\text{nut} - \text{acorn} + \text{mushroom} = \square$$

$$\text{acorn} = \square$$

$$\text{mushroom} = \square$$

$$\text{nut} = \square$$

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Credit: ksuklein

130556262

TAKE A TRY !

$2 + \text{ornament} = 8$

$\text{ornament} = \square$

$\text{ornament} - \text{mitten} = 4$

$\text{mitten} = \square$

$\text{mitten} + 5 = \text{tree}$

$\text{tree} = \square$

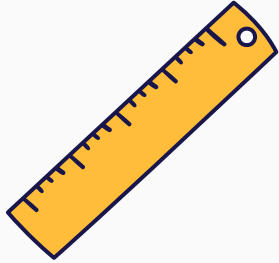
$\text{mitten} + \text{tree} + \text{ornament} = \square$



02

Combine Like Terms

$$2 + 2$$



Combining like terms is a way of simplifying expressions by putting together terms that have the same variable part.

For example:

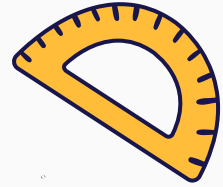
$$3X + 2X + 1 = 6$$

We have to identify like terms first,

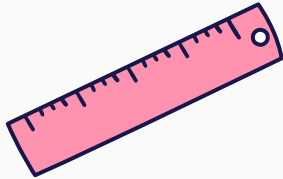
Terms with the same variable part (in this case, terms that have "**X**").

3X and **2X** have the same term "**X**"

So, we can combine them together by doing **$3X + 2X = 5X$**



TAKE A TRY !



TAKE A TRY!

Simplify by combining like terms.

$$6k + 2 - 4k$$

$$-8h - 5 - 9h$$

1. $6z = -54$

6. $5c = -50$

11. $-2x = -2$

2. $6a = 30$

7. $8b = 8$

12. $5y = -40$

A spiral-bound notebook page with a blue background and colorful streamers. The page is white with a spiral binding at the top. The equation $16 - 2t = 5t + 9$ is written in the center of the page.
$$16 - 2t = 5t + 9$$