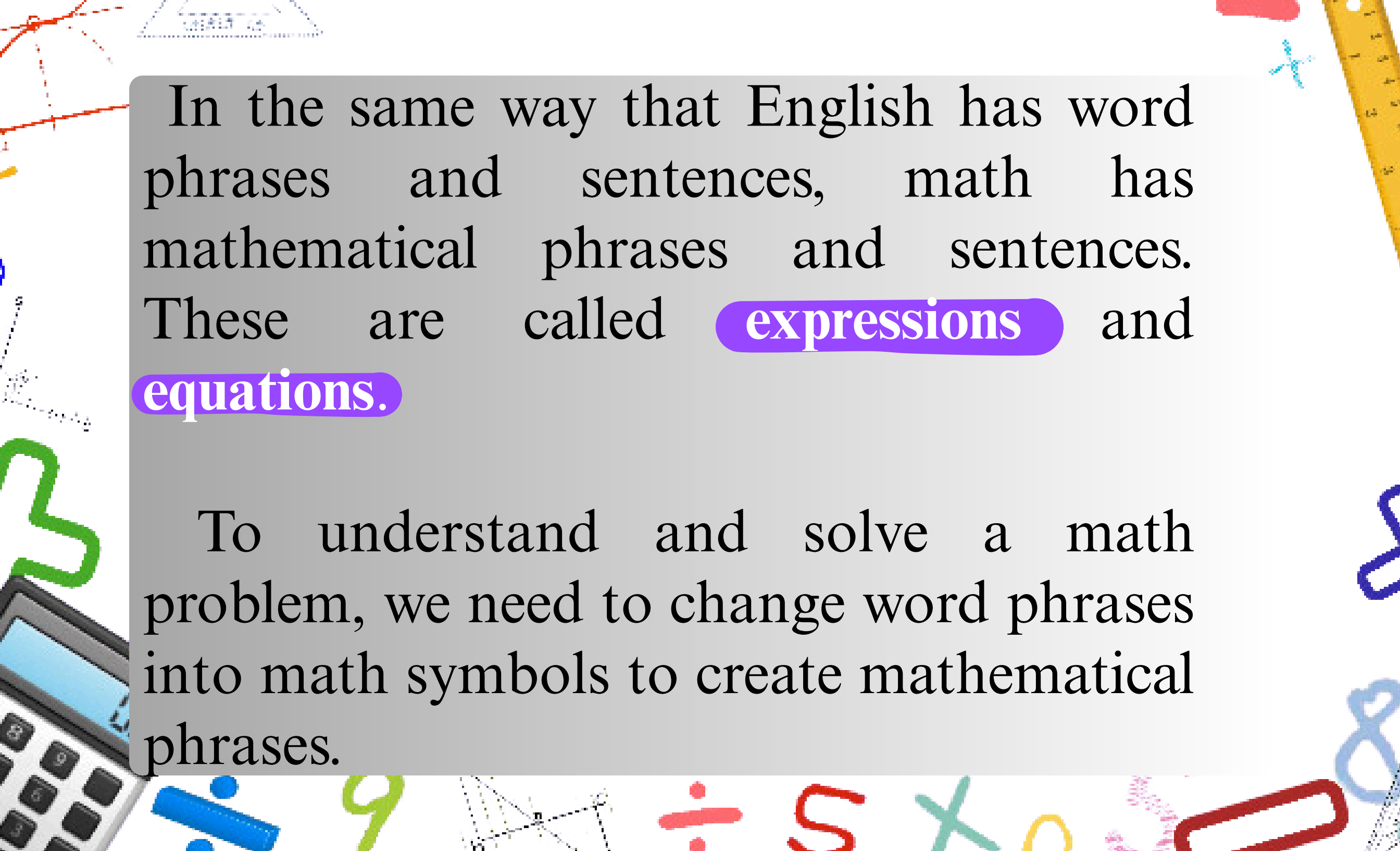


EXPRESSIONS AND EQUATIONS

The background is white and decorated with various mathematical symbols and geometric shapes. In the top left, there is a red dashed line forming a triangle. In the top right, there is a yellow pencil and a blue plus sign. In the bottom left, there is a green outline of a hand pointing up. In the bottom center, there is a grey calculator. In the bottom right, there is a blue number 8. In the bottom left, there is a blue number 9. In the bottom center, there is a red division symbol. In the bottom right, there is a red number 5. In the bottom center, there is a green number 10. In the bottom right, there is a red number 10. In the bottom center, there is a blue number 10.

In the same way that English has word phrases and sentences, math has mathematical phrases and sentences. These are called **expressions** and **equations**.

To understand and solve a math problem, we need to change word phrases into math symbols to create mathematical phrases.

A mathematical phrase is made up of letters and symbols like $+$, $-$, $()$, \times , \div , or $/$, and is called an expression.

An equation, on the other hand, is a statement with an equal sign ($=$) between two expressions that have the same value. Each there is/are corresponding word(s).

In addition to operational symbols, mathematical phrases also include variables and numbers.

Math word problems cannot be solved unless you translate them into symbols.



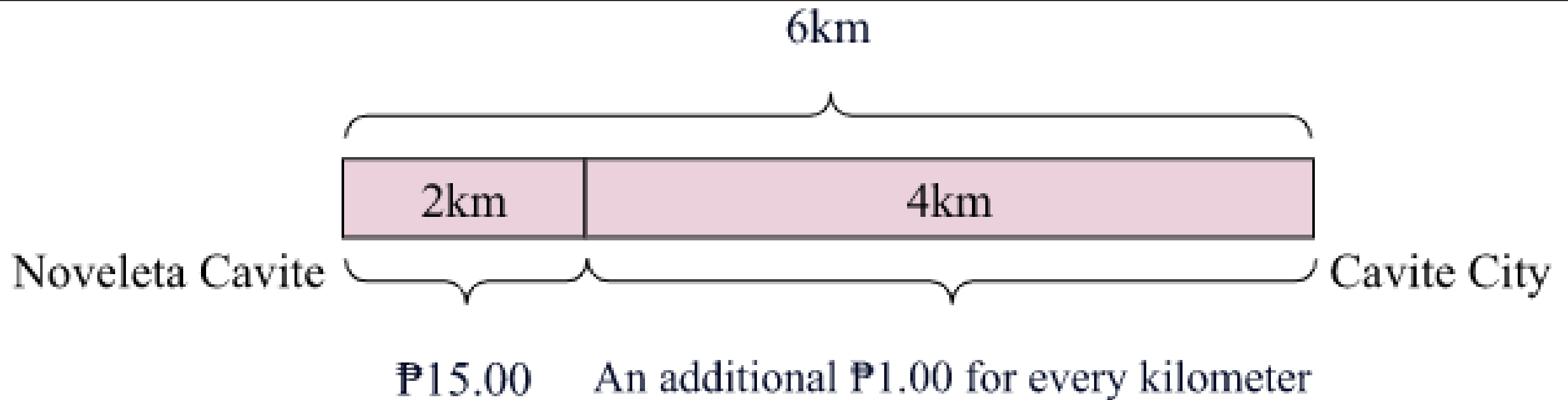
Let's have an example to have a better understanding.

Example problem 1:

Imagine a fare for the first 2 km is Php 8.00 and an additional Php 1.00 for every kilometer. Mercy will go to Cavite City from Noveleta Cavite, and the distance from Noveleta Cavite to Cavite City is 6 km. How much does she need to pay?

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Imagine a fare for the first 2 km is Php 8.00 and an additional Php 1.00 for every kilometer. Mercy will go to Cavite City from Noveleta Cavite, and the distance from Noveleta Cavite to Cavite City is 6 km. How much does she need to pay?

If the first 2 km is P15.00, we need to find the amount of fare for the remaining distance to get the amount that Mercy needs to pay.

The remaining distance is 4 km. Let y = the fixed amount of P1.00 for every kilometer. To find the total amount of fare, we will use the expression $4y + 15$

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If we are to solve the problem:

$$\text{Evaluate } 4y + 15 = 4(1) + 15 = 19$$

Therefore, Mercy needs to pay ₱19.00.

Example problem 2:

Silvia and her family donated canned goods and cup noodles to a certain city that was affected by the typhoon. They donated a total of 300 canned goods and cup noodles. If the number of can goods is twice the number of cup noodles, how many can goods did they donate?

Example problem 2:

Silvia and her family donated canned goods and cup noodles to a certain city that was affected by the typhoon. They donated a total of 300 canned goods and cup noodles. If the number of can goods is twice the number of cup noodles, how many can goods did they donate?

Let x be the number of cups of noodles.

$2x$ be the number of canned goods.

300 is the total number.

Example problem 2:

Silvia and her family donated canned goods and cup noodles to a certain city that was affected by the typhoon. They donated a total of 300 canned goods and cup noodles. If the number of can goods is twice the number of cup noodles, how many can goods did they donate?

So, the **equation** for this problem is:

$$x + 2x = 300$$

$$300 \div 3 = 100$$

$$100 + 2(100) = 300$$

$$100 + 200 = 300$$

Therefore, the total canned goods they donated are **200** pieces.