EXPRESSIONS AND EQUATIONS

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 +, −, (), ×, ÷, 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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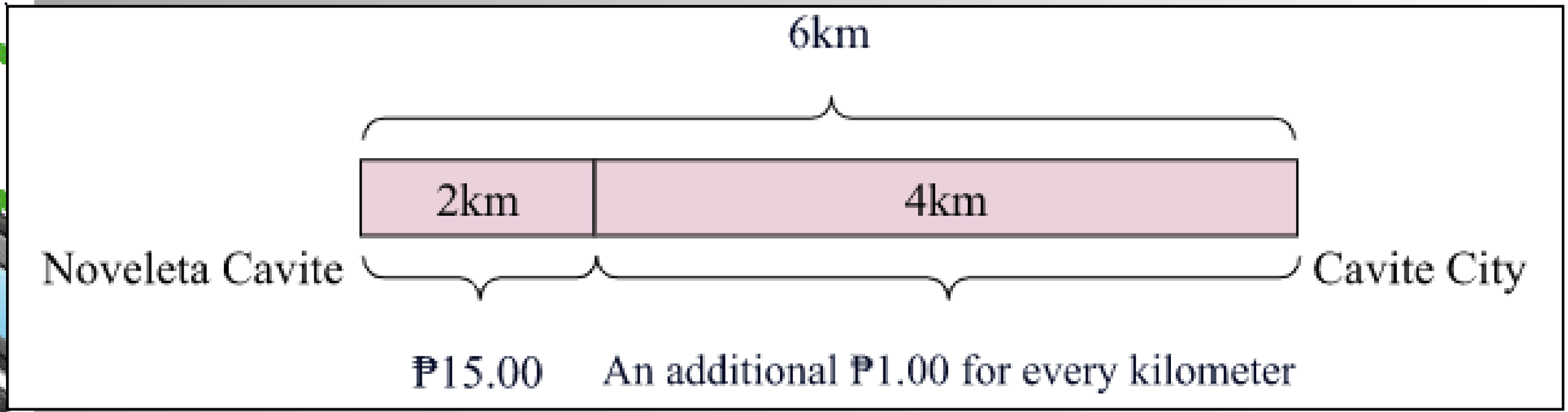

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If the first 2 km is P15.00, we need to find the amount of fare for the remaining distance to get the amount that Mercy needs to pay.

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:

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:

$$\mathbf{x + 2x = 300}$$

$$300 \div 3 = 100$$

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

$$100 + 200 = 300$$

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