Mathematics – Addition
Level I

Overview

Mathematics, or Math, is the study of numbers. A part of mathematics is arithmetic. Arithmetic is the study of adding, subtracting, multiplying and dividing numbers.

Adding numbers together is called addition. Addition also combines groups to create larger groups.

Performing addition is a basic task in arithmetic.

Addition

The **plus sign** is the symbol of addition. It looks like this **+** .

Use the **+** to add two apples to one apple. Like this example:
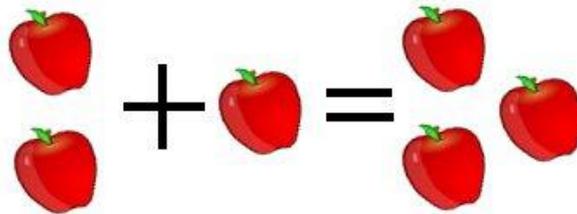
    2 apples + 1 apple

The example would be read as, "two apples plus one apple."

When two or more numbers are added together, the result is called the **sum**. The sum of two apples and one apple is three apples. This example would be written as:

    2 apples + 1 apple = 3 apples

    2 + 1 = 3

The **=** in the example is called an **equals sign**. The equals sign is used to show the sum.

Columnar Addition

Addition in columns is a useful way of writing addition problems. This is an example:

$$
\begin{array}{r}
5 \\
+\ 3 \\
\hline
8
\end{array}
$$

The mathematics problem reads as "5 plus 3 equals 8". In the example, a line is under the number 3. The line is the same as an equals sign **=**.

Writing addition problems in a column is useful for adding numbers with two or more digits.

In this example, two-digit numbers are 17 and 15.

$$
\begin{array}{r}
17 \\
+15 \\
\hline
\end{array}
$$

Now let's try to add the numbers.

Ones Digit Column

Step 1: In columnar addition, we first work with the column on the far right.
It is called the **ones column**.

Look again at the example. In the ones column for each number, we have 7 and 5.

To begin the problem, add the ones column. 7 is added to 5. This equals 12.

Step 2: The ones digit of the number 12, is 2. The digit 2 goes in the column, under the equals line. It stands under 7 and the 5.

Tens Digit Column

Step 3: Next, we work with the column on the left. It is called the **tens column.**

Step 4: The tens digit of the number 12, is a 1. The digit 1 **carries over** to the top of the tens column. Add it to the sum of the digits in the tens column.

One's digit:

(1)

17

+15

(2)

One's digit:
7 + 5 = 12

The 2 is placed under
the equals line.

The 1 is placed at the
top of the ten's digit.

In this example, add the 1 from 17 plus the 1 from 15 plus the 1 that was carried over from the number 12 in the ones digit column. So, 1 + 1 + 1 = 3. Adding these together gives us a sum of 3.

Step 5: This number 3 then takes its place in the tens column under the equals line.
Now we have the sum of 17 + 15, which is 32.

(1)

1 7

+ 1 5

(3)2