PLAYING WITH NUMBERS

GENERALISED FORM OF 2 DIGIT AND 3 DIGIT NUMBERS

WRITING A NUMBER IN GENERAL FORM

In the previous classes, we have read about place value of a digit in a number. We have also learnt how we express a number in expanded form:

Observe the following:

In 12, 1 is at tens place, so place value of $1 = 10 \times 1 = 10$.

and 2 is at ones place, so place value of $2 = 1 \times 2 = 2$

Thus, 12 can be expressed as $12 = 10 \times 1 + 2$

Other 2-digit numbers can also be expressed in the similar way:

eg. $85 = 10 \times 8 + 5$

$99 = 10 \times 9 + 9$

In general, any 2-digit number ab made up of digits a and b can be written as

$ab = 10 \times a + b = 10a + b$

On reversing the order of the digits of ab, we get the new 2-digit number as

$ba = 10 \times b + a = 10\ b + a$

Note :

Here ab does not mean $a \times b$.

Again, observe the following:

In 123,

1 is at hundreds place, so place value of $1 = 100 \times 1 = 100$

2 is at tens place, so place value of $2 = 10 \times 2 = 20$

3 is at units place, so place value of $3 = 1 \times 3 = 3$

Thus, 123 can be expressed as $123 = 100 \times 1 + 10 \times 2 + 3$

Similarly, we have $157 = 100 \times 1 + 10 \times 5 + 7$

In general, for a 3-digit number abc, add up of digits a, b and c can be written as

$abc = 100 \times a + 10 \times b + c$

$= 100a + 10b + c$

On reversing the order of the digit of abc, we get the new 3-digit number as

$cba = 100 \times c + 10 \times b + a$

$= 100\ c + 10b + a$