

## I Preliminary information :-

- ① Name of the student : C. Radha
- ② class : 7<sup>th</sup> class E.M
- ③ Roll No : 6
- ④ Name of the lesson/unit : Integers

## II Detailed information of the project

### ① Title of the project :-

Addition, subtraction and multiplication of integers  
(collected from daily life situations) using number line.

### ② Objectives of the project :-

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- \* Collection of integers used in daily life situations
- \* Representation of integers addition, subtraction and multiplication on number line.

### ③ Materials used : Scale, pen, pencil, eraser

### ④ Tools :

- \* Identification of integers from number system.
- \* Idea of moving left/right on number line according to addition/subtraction of integer.

### ⑤ Procedure :

First I collected integers used in our daily life situations. Maths group "MATHS 4 ALL" 9493225056

## Process:

(i) For addition of integers

- To add a positive integer we move right on the number line.

- To add a negative integer we move left on the number line.

(ii) For subtraction of integers

- To subtract a positive integer, we move left on a number line.

- To subtract a negative integer, we move right on a number line.

(iii) For multiplication of integers

- To multiply an integer ( $m$ ) with a positive integer ( $n$ ) we have ' $m$ ' jumps with ' $n$ ' steps from zero towards right on number line.

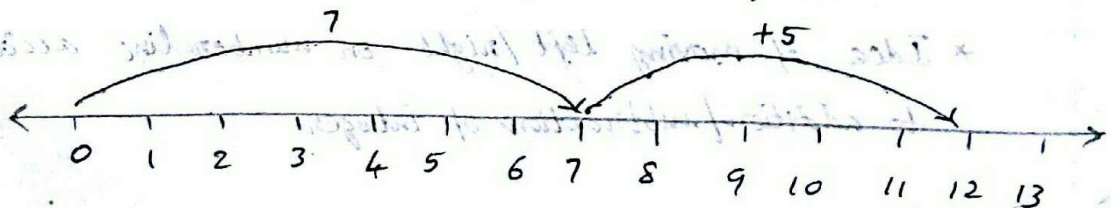
- To multiply an integer ( $m$ ) with a negative integer ( $n$ ) we have ' $m$ ' jumps with ' $n$ ' steps from zero towards left on number line.

## Problem Solving:-

### Representation :

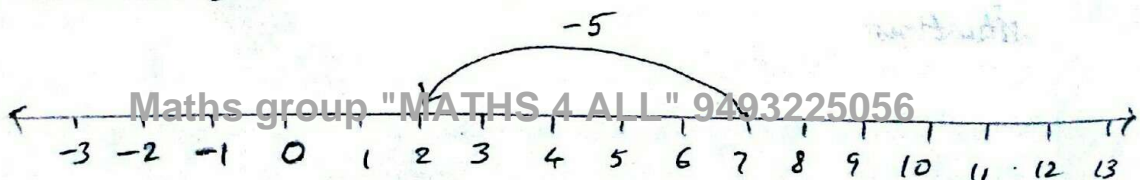
Ex 1:- There are 7 boys and 5 girls in a class. Find total number of students in the class.

Here 7 and 5 are positive integers



$$7 + 5 = 12$$

### Subtraction :-

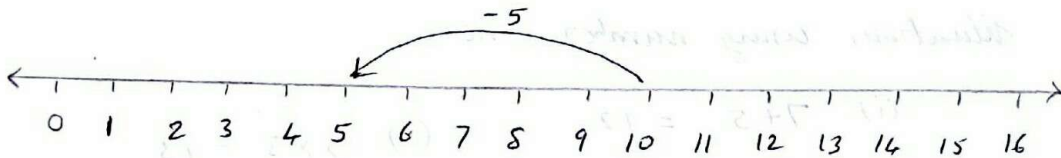


$$7 - 5 = 2$$

Ex 2:- In Manali the average temperature in summer and winter is  $10^{\circ}\text{C}$  and  $-5^{\circ}\text{C}$  respectively.

Find Sum and difference of temperatures

$$10 + (-5)$$

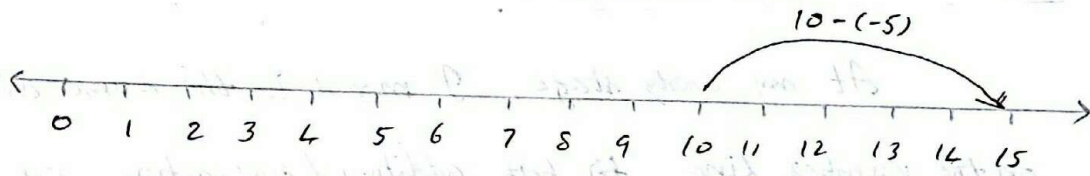


$$10 + (-5) = 5$$

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Difference of temperatures

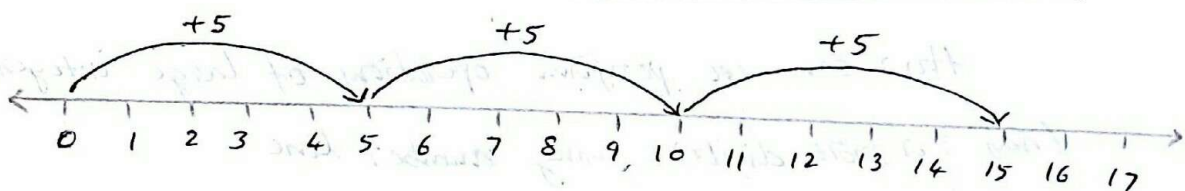
$$10 - (-5)$$



$$10 - (-5) = 15$$

Ex 3:- Cost of each pen is ₹5. Find the cost of 3 pens.

$$5 \times 3$$



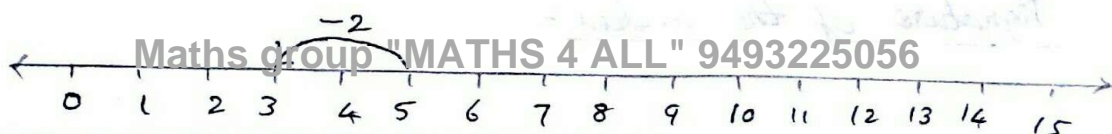
$$5 \times 3 = 15$$

Ex 4:- A shopkeeper earned a profit ₹5 by selling a book and he got ₹2 loss by selling a pen. Find total gain/loss.

Here, For gain we take positive integer 5

For loss we take negative integer -2

$$5 + (-2)$$



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Overall gain  $5 + (-2) = 3$

### Conclusion :-

I performed operations like addition, subtraction and multiplication of integers taken in daily life situations using number line

(i)  $7 + 5 = 12$

(v)  $5 \times 3 = 15$

(ii)  $7 - 5 = 2$

(vi)  $5 + (-2) = 3$

(iii)  $10 + (-5) = 5$

(iv)  $10 - (-5) = 15$

### Experiences of the students :-

At my early stage, I moved in the same direction on the number line for both addition/subtraction of positive/negative integers. After I instructed by my teacher I corrected to my mistake.

### Doubts and Questions :-

How can we perform operations of large integers (say 3 or more digits) using number line.

### Acknowledgement :-

I convey my sincere thanks to my Maths teacher for his earnest efforts in completing the project.

### Reference Books :-

VII Class APSCERT Maths Text Book

NCERT Maths Text Book by R.D. SHARMA

Signature of the student :-

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