Basics of using the abacus:

Abacus is a tool which can be used to calculate - Add, Subtract, Multiply & divide, apart from being able to do other arithmetic functions and Brain activation. The user of Abacus, predominantly a student child would need to properly positioned to operate the Abacus with the deft fingers of both the hands.

1. The student should position of abacus on the table on the table, four fingers distance away from the edge of the Table

2. He / she should sit upright and be seated front half of the chair space.

3. Abacus tool should be kept perpendicular to the nose of the student when the student looks at it from the top.
4. If you are a Right Hand writer, hold the pencil in your right hand and hold abacus in the left hand when you do computation using Abacus.

5. If you are a Left Hand writer, hold Abacus and pencil both in left hand when you do computation using abacus.

6. After the computation is over, change the position of pencil from holding to writing position when you write the answer.

7. When the answer is written, immediately take the pencil from writing position to holding position (shooting position) and proceed with your next computation.
8. Pencil and abacus must be held in the respective hands until you finish the computation of the last sum using abacus.

9. When you do Mental Sums (do not hold abacus in your hand but always hold pencil in your hand) mental sums without using abacus do not hold abacus in your hand but always hold pencil in your hand.

10. While doing the abacus and book practice, student should always hold pencil in the hand.

11. **Clearing the Abacus** is bringing the Abacus to Zero position - all the sliders of all the columns should be moved away from the bar.

12. Clear the abacus before you start the new sum by using short clearance short clearance or Long clearance.
Operation of Abacus for Addition:

1. When the slider/s moves towards the Bar it assigns the value, it is for plus operation.

**Plus (+) Operation**

This picture displays two unit pointer of the 9th column, the first unit pointer column represents zero position. The second unit pointer column displays slider movements towards the bar for plus operation, which represents units value.

2. When the slider/s moves away from the bar it does not assign any value, it is minus operation

**Minus (-) Operation**

The first unit pointer column displays slider movements away from the bar for minus operation, which represents zero value. The second unit pointer column displays zero position.

3. There are totally five unit pointers facing columns, but the student should use only the middle unit pointer (in the 9th column) -

**Home column** - to start doing the computation.
4. **Use right hand thumb to move lower slider** in the 9th column towards the bar for plus (+) operation.

5. **Use right hand index finger to move lower slider** in the 9th column away from the bar for minus (-) operation.

6. **Use only index finger to move the upper slider** in the 9th column, towards and away from the bar for both plus and minus (+ & -) operations.
7. Left hand index finger must be used to move the lower slider in the 10th column for both operations i.e. +10 to +40 and -10 to -40

8. Use left hand middle finger to move upper slider in the 10th column again for both minus and plus (+/-) operations. i.e. +50 & -50
Operation of Abacus for Subtraction:

1. When the slider/s moves away from the bar it does not assign any value, it is for Minus (-) operation.
2. Use right hand index finger to move lower slider in the 9th column, away from the bar for minus (-) operation.
3. Use only index finger to move the upper slider in the 9th column, away from the bar for Minus (-) operations.
4. Left hand index finger must be used to move the lower slider away from the bar in the 10th column for -10 to -40.
5. Use left hand middle finger to move upper slider away from the bar in the 10th column for Minus (-) operation, i.e. -50.

Values of sliders from Column nos. 9 to 17 of Abacus

1. The 9th column facing unit pointer is considered as Unit / Home column. The upper slider represents the value as Five (5) of this column and the lower slider represents the value as one (1) each. The sliders set in this column assigns value “one” each, together displays

Addition

Move lower slider towards the bar using right hand thumb in the 9th / home column as shown in the picture.

Subtraction

Move lower slider away from the bar using right hand index finger in the 9th / home column as shown in the picture.
Addition
Move 2 lower sliders together towards the bar using right hand thumb in the 9th / home column as shown in the picture.

Subtraction
Move 2 lower sliders together away from the bar using right hand index finger in the 9th / home column as shown in the picture.

Addition
Move 3 lower sliders together towards the bar using right hand thumb in the 9th / home column as shown in the picture.

Subtraction
Move 3 lower sliders together away from the bar using right hand index finger in the 9th / home column as shown in the picture.

Addition
Move 4 lower sliders together towards the bar using right hand thumb in the 9th / home column as shown in the picture.

Subtraction
Move 4 lower sliders together away from the bar using right hand index finger in the 9th / home column as shown in the picture.
Addition
Move upper slider towards the bar using right hand index finger in the 9th / home column as shown in the picture.

Subtraction
Move upper slider away from the bar using right hand index finger in the 9th / home column as shown in the picture.

Addition
Move upper and a lower slider together towards the bar using right hand index finger and thumb together in the 9th / home column as shown in the picture.

Subtraction
Move upper and lower slider together away from the bar using right hand index finger and thumb together in the 9th / home column as shown in the picture.

Addition
Move upper and 2 lower sliders together towards the bar using right hand index finger and thumb together in the 9th / home column as shown in the picture.
**Subtraction**
Move upper and 2 lower sliders together away from the bar using right hand index finger and thumb together in the 9th / home column as shown in the picture.7,

![Diagram of Indian Abacus values for slider positions](image)

**Addition**
Move upper and 3 lower sliders together towards the bar using right hand index finger and thumb together in the 9th / home column as shown in the picture.

**Subtraction**
Move upper and 3 lower sliders together away from the bar using right hand index finger and thumb together in the 9th / home column as shown in the picture.8,

![Diagram of Indian Abacus values for slider positions](image)

**Addition**
Move upper and 4 lower sliders together towards the bar using right hand index finger and thumb together in the 9th / home column as shown in the picture.

**Subtraction**
Move upper and 4 lower sliders together away from the bar using right hand index finger and thumb together in the 9th / home column as shown in the picture.9 as the case may be. When the slider/s moves away from the bar it loses its value, it is for Minus (-) operation.

2. The **10th column** on the left side gets increased with ten times more value. The upper slider represents the value as Fifty (50) of this column and the lower slider represents the value as Ten (10) each. The slider moved towards the bar on this column gets increased by the value as ten times more, example
Addition
Move 1 lower slider towards the bar using left hand index finger in the 10th column as shown in the picture.

Subtraction
Move 1 lower slider away from the bar using left hand index finger in the 10th column as shown in the picture.

Addition
Move 2 lower sliders together towards the bar using left hand index finger in the 10th column as shown in the picture.

Subtraction
Move 2 lower sliders together away from the bar using left hand index finger in the 10th column as shown in the picture.

Addition
Move 3 lower sliders together towards the bar using left hand index finger in the 10th column as shown in the picture.

Subtraction
Move 3 lower sliders together away from the bar using left hand index finger in the 10th column as shown in the picture.
Addition
Move 4 lower sliders together towards the bar using left hand index finger in the 10th column as shown in the picture.

Subtraction
Move 4 lower sliders together away from the bar using left hand index finger in the 10th column as shown in the picture.

Addition
Move upper slider towards the bar using left hand middle finger in the 10th column as shown in the picture.

Subtraction
Move upper slider away from the bar using left hand middle finger in the 10th column as shown in the picture.

Addition
Move upper and a lower slider together towards the bar using left hand middle and index fingers together in the 10th column as shown in the picture.

Subtraction
Move upper and a lower slider together away from the bar using left hand middle and index fingers together in the 10th column as shown in the picture.
Addition
Move upper and 2 lower sliders together towards the bar using left hand middle and index fingers together in the 10th column as shown in the picture.

Subtraction
Move upper and 2 lower sliders together away from the bar using left hand middle and index fingers together in the 10th column as shown in the picture. 70.

Addition
Move upper and 3 lower sliders together towards the bar using left hand middle and index fingers together in the 10th column as shown in the picture.

Subtraction
Move upper and 3 lower sliders together away from the bar using left hand middle and index fingers together in the 10th column as shown in the picture. 80.

Addition
Move upper and 4 lower sliders together towards the bar using left hand middle and index fingers together in the 10th column as shown in the picture.
**Subtraction**

Move upper and 4 lower sliders together away from the bar using left hand middle and index fingers together in the 10th column as shown in the picture.\[90,\]

When the slider/s moves away from the bar it loses its value, it is for Minus (\(-\)) operation.

3. The **11th column** on the left side gets increased with ten times more value. The upper slider represents the value as Five Hundred (500) of this column and the lower slider represents the value as One Hundred (100) each. The slider moved towards the bar on this column gets increased by the value as ten times more, example

![Diagram](image)

**Addition**

Move a lower slider towards the bar using left hand index finger in the 11th column as shown in the picture.

**Subtraction**

Move a lower slider away from the bar using left hand index finger in the 11th column as shown in the picture.\[100,\]

![Diagram](image)

**Addition**

Move 2 lower sliders together towards the bar using left hand index finger in the 11th column as shown in the picture.

**Subtraction**

Move 2 lower sliders together away from the bar using left hand index finger in the 11th column as shown in the picture.\[200,\]
Addition
Move 3 lower sliders together towards the bar using left hand index finger in the 11th column as shown in the picture.

Subtraction
Move 3 lower sliders together away from the bar using left hand index finger in the 11th column as shown in the picture.

Addition
Move 4 lower sliders together towards the bar using left hand index finger in the 11th column as shown in the picture.

Subtraction
Move 4 lower sliders together away from the bar using left hand index finger in the 11th column as shown in the picture.

Addition
Move upper slider together towards the bar using left hand middle finger in the 11th column as shown in the picture.

Subtraction
Move upper slider together away from the bar using left hand middle finger in the 11th column as shown in the picture.
Addition
Move upper and a lower slider together towards the bar using left hand middle and index fingers together in the 11th column as shown in the picture.

Subtraction
Move upper and a lower slider together away from the bar using left hand middle and index fingers together in the 11th column as shown in the picture.

Addition
Move upper and 2 lower sliders together towards the bar using left hand middle and index fingers together in the 11th column as shown in the picture.

Subtraction
Move upper and 2 lower sliders together away from the bar using left hand middle and index fingers together in the 11th column as shown in the picture.

Addition
Move upper and 3 lower sliders together towards the bar using left hand middle and index fingers together in the 11th column as shown in the picture.

Subtraction
Move upper and 3 lower sliders together away from the bar using left hand middle and index fingers together in the 11th column as shown in the picture. 800.

**Addition**
Move upper and 4 lower sliders together towards the bar using left hand middle and index fingers together in the 11th column as shown in the picture.

**Subtraction**
Move upper and 4 lower sliders together away from the bar using left hand middle and index fingers together in the 11th column as shown in the picture. 900

When the slider/s moves away from the bar it loses its value, it is for Minus (-) operation.

4. The 12th column on the left side gets increased with ten times more value. The upper slider represents the value as Five Thousand (5000) of this column and the lower slider represents the value as One Thousand (1000) each. The slider moved towards the bar on this column gets increased by the value as ten times more, example

**Addition**
Move a lower slider towards the bar using left hand index finger in the 12th column as shown in the picture.

**Subtraction**
Move a lower slider away from the bar using left hand index finger in the 12th column as shown in the picture. 1000.
Addition
Move 2 lower sliders together towards the bar using left hand index finger in the 12th column as shown in the picture.

Subtraction
Move 2 lower sliders together away from the bar using left hand index finger in the 12th column as shown in the picture. 2000.

Addition
Move 3 lower sliders together towards the bar using left hand index finger in the 12th column as shown in the picture.

Subtraction
Move 3 lower sliders together away from the bar using left hand index finger in the 12th column as shown in the picture. 3000.
Addition
Move 4 lower sliders together towards the bar using left hand index finger in the 12th column as shown in the picture.

Subtraction
Move 4 lower sliders together away from the bar using left hand index finger in the 12th column as shown in the picture.4000.

Addition
Move upper slider towards the bar using left hand middle finger in the 12th column as shown in the picture.

Subtraction
Move upper slider away from the bar using left hand middle finger in the 12th column as shown in the picture.5000.
Addition
Move upper and a lower slider together towards the bar using left hand middle and index fingers together in the 12th column as shown in the picture.

Subtraction
Move upper and a lower slider together away from the bar using left hand middle and index fingers together in the 12th column as shown in the picture.

Addition
Move upper and 2 lower sliders together towards the bar using left hand middle and index fingers together in the 12th column as shown in the picture.

Subtraction
Move upper and 2 lower sliders together away from the bar using left hand middle and index fingers together in the 12th column as shown in the picture.
Addition
Move upper and 3 lower sliders together towards the bar using left hand middle and index fingers together in the 12th column as shown in the picture.

Subtraction
Move upper and 3 lower sliders together away from the bar using left hand middle and index fingers together in the 12th column as shown in the picture.8000.

Addition
Move upper and 4 lower sliders together towards the bar using left hand middle and index fingers together in the 12th column as shown in the picture.

Subtraction
Move upper and 4 lower sliders together away from the bar using left hand middle and index fingers together in the 12th column as shown in the picture.9000
When the slider/s moves away from the bar it loses its value, it is for Minus (-) operation.
5. The **13th column** on the left side gets increased with ten times more value. The upper slider represents the value as Fifty Thousand (50000) of this column and the lower slider represents the value as Ten Thousand (10000) each. The slider moved towards the bar on this column gets increased by the value as ten times more, example

**Addition**

Move a lower slider towards the bar using left hand index finger in the 13th column as shown in the picture.

**Subtraction**

Move a lower slider away from the bar using left hand index finger in the 13th column as shown in the picture.

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Addition

Move 2 lower sliders together towards the bar using left hand index finger in the 13th column as shown in the picture.

Subtraction

Move 2 lower sliders together away from the bar using left hand index finger in the 13th column as shown in the picture.
Addition
Move 3 lower sliders together towards the bar using left hand index finger in the 13th column as shown in the picture.

Subtraction
Move 3 lower sliders together away from the bar using left hand index finger in the 13th column as shown in the picture. 30000.

Addition
Move 4 lower sliders together towards the bar using left hand index finger in the 13th column as shown in the picture.

Subtraction
Move 4 lower sliders together away from the bar using left hand index finger in the 13th column as shown in the picture. 40000.
Addition
Move upper slider towards the bar using left hand middle finger in the 13th column as shown in the picture.

Subtraction
Move upper slider away from the bar using left hand middle finger in the 13th column as shown in the picture.50000.

Addition
Move upper and a lower slider together towards the bar using left hand middle and index fingers together in the 13th column as shown in the picture.

Subtraction
Move upper and a lower slider together away from the bar using left hand middle and index fingers together in the 13th column as shown in the picture.60000.
Addition
Move upper and 2 lower sliders together towards the bar using left hand middle and index fingers together in the 13th column as shown in the picture.

Subtraction
Move upper and 2 lower sliders together away from the bar using left hand middle and index fingers together in the 13th column as shown in the picture.70000.

Addition
Move upper and 3 lower sliders together towards the bar using left hand middle and index fingers together in the 13th column as shown in the picture.

Subtraction
Move upper and 3 lower sliders together away from the bar using left hand middle and index fingers together in the 13th column as shown in the picture.80000.
Addition
Move upper and 4 lower sliders together towards the bar using left hand middle and index fingers together in the 13th column as shown in the picture.

Subtraction
Move upper and 4 lower sliders together away from the bar using left hand middle and index fingers together in the 13th column as shown in the picture.

When the slider/s moves away from the bar it loses its value, it is for Minus (-) operation.

The 14th column on the left side gets increased with ten times more value. The upper slider represents the value as Five Lakhs (500000) of this column and the lower slider represents the value as one lakh (100000) each. The slider moved towards the bar on this column gets increased by the value as ten times more, example

Addition
Move a lower slider towards the bar using left hand index finger in the 14th column as shown in the picture.
**Subtraction**
Move a lower slider away from the bar using left hand index finger in the 14th column as shown in the picture. **100000**.

**Addition**
Move 2 lower sliders together towards the bar using left hand index finger in the 14th column as shown in the picture.

**Subtraction**
Move 2 lower sliders together away from the bar using left hand index finger in the 14th column as shown in the picture. **200000**.

**Addition**
Move 3 lower sliders together towards the bar using left hand index finger in the 14th column as shown in the picture.

**Subtraction**
Move 3 lower sliders together away from the bar using left hand index finger in the 14th column as shown in the picture.

**Addition**
Move 4 lower sliders together towards the bar using left hand index finger in the 14th column as shown in the picture.

**Subtraction**
Move 4 lower sliders together away from the bar using left hand index finger in the 14th column as shown in the picture.

Move upper slider towards the bar using left hand middle finger in the 14th column as shown in the picture.

**Addition**
Move upper slider away from the bar using left hand middle finger in the 14th column as shown in the picture.
Addition
Move upper and a lower slider together towards the bar using left hand middle and index fingers together in the 14th column as shown in the picture.

Subtraction
Move upper and a lower slider together away from the bar using left hand middle and index fingers together in the 14th column as shown in the picture.

Addition
Move upper and 2 lower sliders together towards the bar using left hand middle and index fingers together in the 14th column as shown in the picture.

Subtraction
Move upper and 2 lower sliders together away from the bar using left hand middle and index fingers together in the 14th column as shown in the picture.
Addition
Move upper and 3 lower sliders together towards the bar using left hand middle and index fingers together in the 14th column as shown in the picture.

Subtraction
Move upper and 3 lower sliders together away from the bar using left hand middle and index fingers together in the 14th column as shown in the picture.

Addition
Move upper and 4 lower sliders together towards the bar using left hand middle and index fingers together in the 14th column as shown in the picture.

Subtraction
Move upper and 4 lower sliders together away from the bar using left hand middle and index fingers together in the 14th column as shown in the picture.

When the slider/s moves away from the bar it loses its value, it is for Minus (-) operation.
7. The **15th column** on the left side gets increased with ten times more value. The upper slider represents the value as Fifty Lakhs (5000000) of this column and the lower slider represents the value as Ten lakhs (1000000) each. The slider moved towards the bar on this column gets increased by the value as ten times more, example.

**Addition**
Move a lower slider towards the bar using left hand index finger in the 15th column as shown in the picture.

**Subtraction**
Move a lower slider away from the bar using left hand index finger in the 15th column as shown in the picture.

**Addition**
Move 2 lower sliders together towards the bar using left hand index finger in the 15th column as shown in the picture.

**Subtraction**
Move 2 lower sliders together away from the bar using left hand index finger in the 15th column as shown in the picture.
Addition
Move 3 lower sliders together towards the bar using left hand index finger in the 15th column as shown in the picture.

Subtraction
Move 3 lower sliders together away from the bar using left hand index finger in the 15th column as shown in the picture.

Addition
Move 4 lower sliders together towards the bar using left hand index finger in the 15th column as shown in the picture.

Subtraction
Move 4 lower sliders together away from the bar using left hand index finger in the 15th column as shown in the picture.
Addition
Move upper slider towards the bar using left hand middle finger in the 15th column as shown in the picture.

Subtraction
Move upper slider away from the bar using left hand middle finger in the 15th column as shown in the picture. 5000000.

Addition
Move upper and a lower slider together towards the bar using left hand middle and index fingers together in the 15th column as shown in the picture.

Subtraction
Move upper and a lower slider together away from the bar using left hand middle and index fingers together in the 15th column as shown in the picture. 6000000.
**Addition**
Move upper and 2 lower sliders together towards the bar using left hand middle and index fingers together in the 15th column as shown in the picture.

**Subtraction**
Move upper and 2 lower sliders together away from the bar using left hand middle and index fingers together in the 15th column as shown in the picture. 7000000,

**Addition**
Move upper and 3 lower sliders together towards the bar using left hand middle and index fingers together in the 15th column as shown in the picture.

**Subtraction**
Move upper and 3 lower sliders together away from the bar using left hand middle and index fingers together in the 15th column as shown in the picture. 8000000.
Addition
Move upper and 4 lower sliders together towards the bar using left hand middle and index fingers together in the 15th column as shown in the picture.

Subtraction
Move upper and 4 lower sliders together away from the bar using left hand middle and index fingers together in the 15th column as shown in the picture. When the slider/s moves away from the bar it loses its value, it is for Minus (-) operation.

8. The 16th column on the left side gets increased with ten times more value. The upper slider represents the value as Five Crores (50000000) of this column and the lower slider represents the value as one crore (10000000) each. The slider moved towards the bar on this column gets increased by the value as ten times more, example

Addition
Move a lower slider towards the bar using left hand index finger in the 16th column as shown in the picture.

Subtraction
Move a lower slider away from the bar using left hand index finger in the 16th column as shown in the picture.
Addition
Move 2 lower sliders together towards the bar using left hand index finger in the 16th column as shown in the picture.

Subtraction
Move 2 lower sliders together away from the bar using left hand index finger in the 16th column as shown in the picture.20000000.

Addition
Move 3 lower sliders together towards the bar using left hand index finger in the 16th column as shown in the picture.

Subtraction
Move 3 lower sliders together away from the bar using left hand index finger in the 16th column as shown in the picture.30000000.
Addition
Move 4 lower sliders together towards the bar using left hand index finger in the 16th column as shown in the picture.

Subtraction
Move 4 lower sliders together away from the bar using left hand index finger in the 16th column as shown in the picture.

Addition
Move upper slider towards the bar using left hand middle finger in the 16th column as shown in the picture.

Subtraction
Move upper slider away from the bar using left hand middle finger in the 16th column as shown in the picture.
Addition
Move upper and a lower slider together towards the bar using left hand middle and index fingers together in the 16th column as shown in the picture.

Subtraction
Move upper and a lower slider together away from the bar using left hand middle and index fingers together in the 16th column as shown in the picture.

Addition
Move upper and 2 lower sliders together towards the bar using left hand middle and index fingers together in the 16th column as shown in the picture.

Subtraction
Move upper and 2 lower sliders together away from the bar using left hand middle and index fingers together in the 16th column as shown in the picture.
Addition
Move upper and 3 lower sliders together towards the bar using left hand middle and index fingers together in the 16th column as shown in the picture.

Subtraction
Move upper and 3 lower sliders together away from the bar using left hand middle and index fingers together in the 16th column as shown in the picture.

Addition
Move upper and 4 lower sliders together towards the bar using left hand middle and index fingers together in the 16th column as shown in the picture.

Subtraction
Move upper and 4 lower sliders together away from the bar using left hand middle and index fingers together in the 16th column as shown in the picture.

When the slider/s moves away from the bar it loses its value, it is for Minus (-) operation.
9. The **17th column** on the left side gets increased with ten times more value. The upper slider represents the value as Fifty Crore (500000000) of this column and the lower slider represents the value as Ten Crore (100000000) each. The slider moved towards the bar on this column gets increased by the value as ten times more, example

![Diagram of Indian Abacus](image)

**Addition**

Move a lower slider towards the bar using left hand index finger in the 17th column as shown in the picture.

**Subtraction**

Move a lower slider away from the bar using left hand index finger in the 17th column as shown in the picture. **100000000**.

![Diagram of Indian Abacus](image)

**Addition**

Move 2 lower sliders together towards the bar using left hand index finger in the 17th column as shown in the picture.

**Subtraction**

Move 2 lower sliders together away from the bar using left hand index finger in the 17th column as shown in the picture. **200000000**.
Addition
Move 3 lower sliders together towards the bar using left hand index finger in the 17th column as shown in the picture.

Subtraction
Move 3 lower sliders together away from the bar using left hand index finger in the 17th column as shown in the picture. 3000000000.

Addition
Move 4 lower sliders together towards the bar using left hand index finger in the 17th column as shown in the picture.

Subtraction
Move 4 lower sliders together away from the bar using left hand index finger in the 17th column as shown in the picture. 4000000000.
Addition
Move upper slider towards the bar using left hand middle finger in the 17th column as shown in the picture.

Subtraction
Move upper slider away from the bar using left hand middle finger in the 17th column as shown in the picture. **500000000**.

Addition
Move upper and a lower slider together towards the bar using left hand middle and index fingers together in the 17th column as shown in the picture.

Subtraction
Move upper and a lower slider together away from the bar using left hand middle and index fingers together in the 17th column as shown in the picture. **600000000**.
Addition
Move upper and 2 lower sliders together towards the bar using left hand middle and index fingers together in the 17th column as shown in the picture.

Subtraction
Move upper and 2 lower sliders together away from the bar using left hand middle and index fingers together in the 17th column as shown in the picture.

Addition
Move upper and 3 lower sliders together towards the bar using left hand middle and index fingers together in the 17th column as shown in the picture.

Subtraction
Move upper and 3 lower sliders together away from the bar using left hand middle and index fingers together in the 17th column as shown in the picture.
Addition

Move upper and 4 lower sliders together towards the bar using left hand middle and index fingers together in the 17th column as shown in the picture.

Subtraction

Move upper and 4 lower sliders together away from the bar using left hand middle and index fingers together in the 17th column as shown in the picture. 900000000.

When the slider/s moves away from the bar it loses its value, it is for Minus (-) operation.