

ADDITION & SUBTRACTION

1-10

1. Q) What is ADDITION?

A) Addition is the Process of Adding, an Arithmetic Increase, something Extra. Addition is a Mathematical Operation performed on Two Numbers to give a Third Number. The Two Numbers added are called “Addends” and the Result is called the Sum. Addition is the Process of Increasing one Number, called Addend, by another Number called “Augend”.

2. Addition of Integers is Equivalent to the Process of Accumulating Sets of Objects.

3. Addition of Fractions is performed by Putting each in Terms of a Common Denominator, and Adding the Numerators.

4. Adding of Numbers is both Commutative and Associative, such that: $a + b = b + a$ and $a + (b + c) = (a + b) + c$

5. Complex Numbers are Added by adding the Real and Imaginary Parts Separately; such that :
 $(a + ib) + (c + id) = (a + c) + i(b + d)$

6. Polynomials are Added by Accumulating Terms of the Same Degree.

7. The Concept of addition can be applied to other entities, such as Vectors, Matrices and Sets.

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8. Q) What is SUBTRACTION ?

A) Subtraction is the Act or Process of Subtracting. To Subtract means to Make Less, to Take Away From, to take a Number or Quantity away from another Number or Quantity.

9. Subtraction is the INVERSE OPERATION to Addition; the Process, for two Given Numbers, gives the other; written as $d = a - b$ where d is the “Difference”, a is the “Minuend” and b is the Subtraend. The Subtraend Plus the Difference Gives the Minuend.

10. The RULES for Adding REAL NUMBERS :

When the Numbers have the SAME SIGN, Add their Absolute Values & Give the Sum the Same Sign as BOTH Numbers.

When the Numbers have DIFFERENT SIGNS, Subtract their Absolute Values & Give the Sum the Sign as the Number with the LARGER Absolute Value.