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1. Solvability of problem: A problem is said to be solvable first either if you find a solution means what there exists a potential solution, you have an algorithm and procedure to find its solution but also the problem is solvable if you proved mathematically there exists no solution which means the problem does not require any further discussion because we know the problem can never be solvable n matter how many times, we try to solve the problem.

Un-solvability of problem: is a temporary status of the problem because a problem is unsolvable, we say that instant of time neither we are able to solve the problem nor in a position to say that the problem can not be solved which means in unsolvable problems we are still confused, and the discussion is still open. And if the problem lies in this domain so it is known as an unsolvable problem.

1. Computational complexity: is to classify and compare the practical difficulty of solving problems about finite combinatorial objects. a measure of the amount of computing resources (time and space) that a particular algorithm consumes when it runs.
2. Computable function: A function f is computable if there exists an algorithm that will, given any argument x, eventually return the value f(x). If we think of algorithms as programs, then intuitively, a function f is computable if we can write a program that will on any meaningful input x output f(x).

Example a set of natural numbers S is computable, if it is possible to write a program, which when given any natural number *n* as input, will output either n∈S ∈ or n∉S ∉, and will always do so correctly, and in a finite amount of time.

1. Decidable: A problem is decidable if we can always construct a corresponding algorithm that can answer the problem correctly. For example To find all the prime numbers in the range of 100 to 1000. we can easily devise an algorithm that can enumerate all the prime numbers in this range.

Undecidable: The problems for which we can’t construct an algorithm that can answer the problem correctly in finite time. Fermat’s Theorem, a popular Undecidable Problem which states that no three positive integers a, b and c for any n>2 can ever satisfy the equation: a^n + b^n = c^n. when we compute this it will run forever which makes it undecidable problem.

1. Computability: The study of what can/ cannot be done via purely mechanical means. A mathematical problem is computable if it can be solved in principle by a computing device. Some common synonyms for “computable” are “solvable”, “decidable”, and “recursive”.