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# Time and Space Complexity

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## Time Complexity

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Time complexity of the algorithm is the represented of the amount of time required by the algorithm to execut the completion.

Time complexity denoted by  **$t(n)$** .

where,

- $t(n)$  is time taken for input size  $n$ .

How to check alogrithim efficienecy:-

There are two type of check of alogrithim efficienecy

### Time factor

Time factor is calculated or measured by counting the number of key operations such as compersion of sorting alogrithom.

### Space Factor

The Space is calculated or measured counting the by maxmum memory space required by algorithm.

### Type of Notation for Time Complexity

There are four type of time complexity.

## \* Big Oh

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# Space Complexity

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Space complexity of an algorithm represents the amount of memory space the algorithm needed in its life cycle.