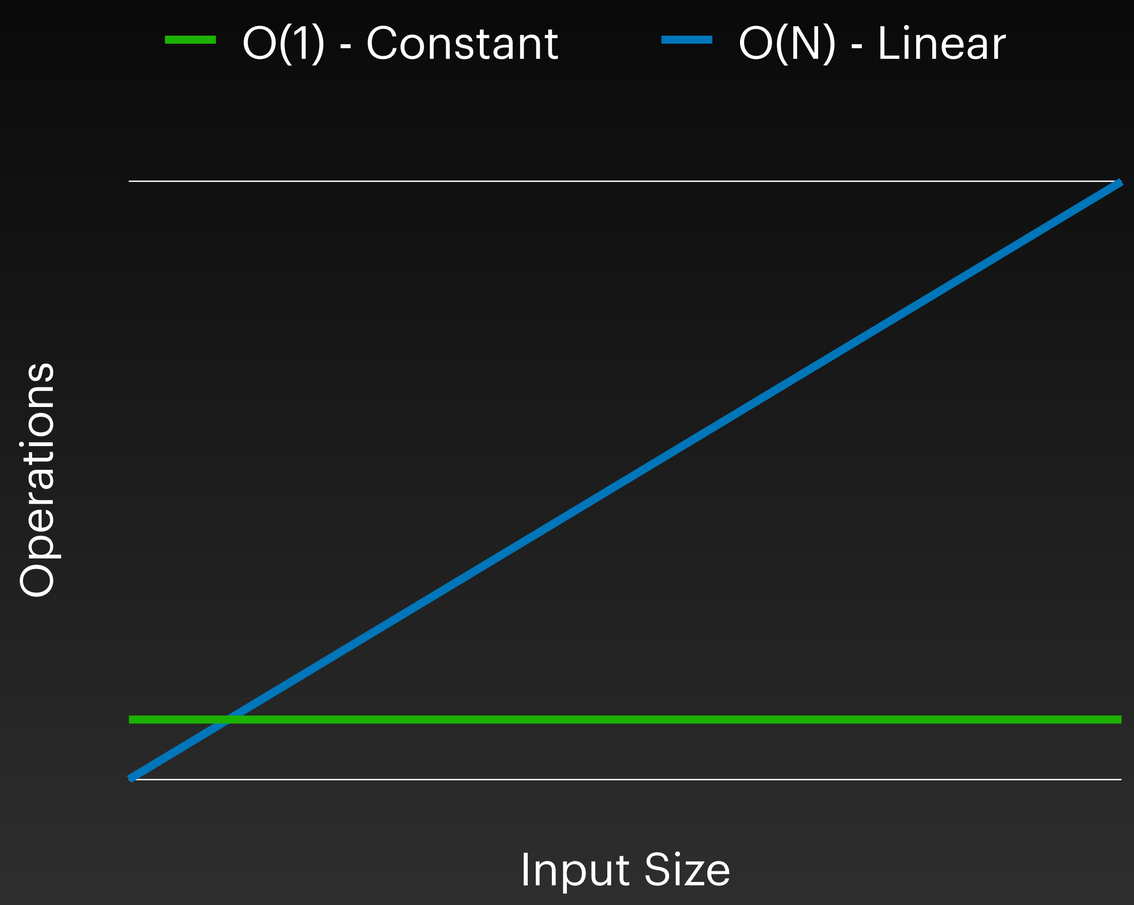
O(N)

The big idea:

As the size of the input grows the processing time required by the algorithm will grow at the same pace. N represents the size of the input.

O(N) is somewhat efficient. No matter how big the constant is or how slow the linear increase is, at some point the linear algorithm will have a longer runtime



O(N) - Linear Complexity

Examples:

- Searching an array
- Performing an action on every element in an array.
- Inserting an element alphabetically into an array
- Downloading something (this example overly simplifies this process)
- Searching page by page for a name in a phone book.