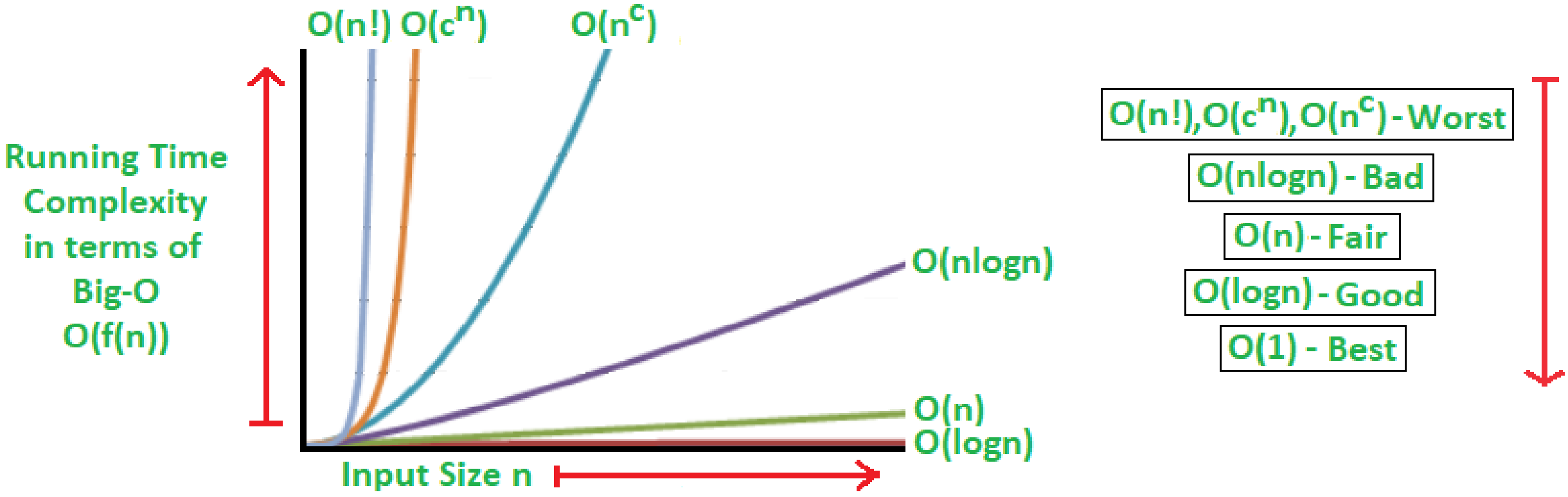
AI III

WHAT IS COMPLEXITY

- the amount of resources (such as time or memory) required to solve a problem or perform a task.
- The most common measure of complexity is time complexity



HOW TO CALCULATE COMPLEXITY

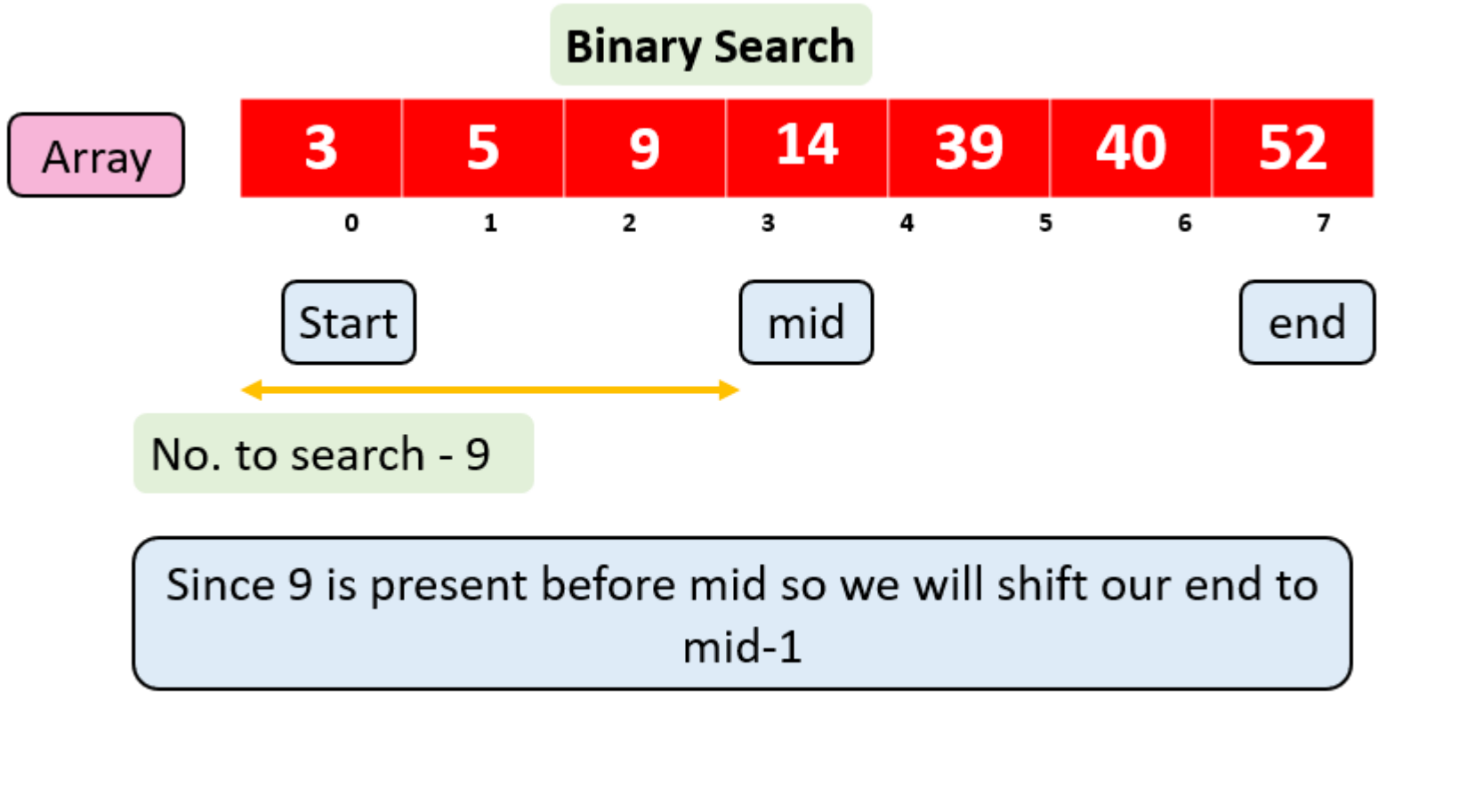
1. Identify the basic operations (Ex: searching an array, sorting a list, or adding two numbers.)

2. Count the number of operations (loop structures and nested loops in the algorithm)

3. Express the result (The most commonly used big O notations).

COMPLEXITY OF BINARY SEARCH

- Time complexity of Binary Search is O(log n), where n is the number of elements in the array



COMPLEXITY OF LINEAR SEARCH

- The time complexity of linear search algorithm is O(n)
- Best case=o(1)