Estimating g(x) Given f(x)

1. O(n)

2. O(n^2)

3. O(n^5)

4. O(n^3)

5. O(n^2 \* log n)

6. O(n log n)

Counting Operations to Produce Polynomials

f(x) = O(1)

f(x) = O(n^2)

f(x) = O(n)

f(x) = O(n)

More Advanced Search

1. Binary Search: g(x) = O(log n)

- Explanation: Binary search will always leave one single element at the end of it’s run and log n constantly divides the function by two similar to binary search which divides the array by two in the middle.

2. Bubble Sort: g(x) = O(n^2)

* Explanation: Bubble sort will always check 2 elements and swap them into inclining or declining order. It keeps going through the array to swap the elements until the array is sorted.