

Binary Search

1. Basics
2. Binary Search on answer (Little Advance)
3. Practise questions

Ternary Search

Binary Search

1. Basics

You must be knowing what is binary search right ?

Searching for an element in sorted array of size n in $\log(n)$ time complexity.

But it is not limited to that, it has very vast applications.

You can learn basics of binary search from from below given link. If you already know the basics you can move to section 2.

<https://www.hackerearth.com/practice/algorithms/searching/binary-search/tutorial/>

2. Binary Search on answer

Beyond arrays: the discrete binary search

Even if you already know what is answer on binary search I will suggest you to spend some time and read this article and if you don't know read it carefully.

<https://www.topcoder.com/community/data-science/data-science-tutorials/binary-search/>

Now you would have got the idea that how Series of YES-NO type questions can be done using binary search.

Let's practise a question on that.

<http://www.spoj.com/problems/AGGRCOW/>

Solution:

<https://www.quora.com/in/What-is-the-correct-approach-to-solve-the-SPOJ-problem-Aggressive-cow>

3. Questions (Try to solve all of them)

<https://csacademy.com/contest/archive/task/pokemon-evolution/>

<https://csacademy.com/contest/archive/task/attack-and-speed/>

<https://www.hackerrank.com/contests/daiict-ipc-2/challenges/ques3-1>

<http://codeforces.com/problemset/problem/957/C>

<http://codeforces.com/problemset/problem/772/A> (Binary search on float !)

<http://codeforces.com/problemset/problem/780/B>

<http://codeforces.com/problemset/problem/923/B>

<http://codeforces.com/contest/958/problem/F2>

Ternary Search:

A ternary search algorithm is a technique for finding the minimum or maximum of a unimodal function. A ternary search determines either that the minimum or maximum cannot be in the first third of the domain or that it cannot be in the last third of the domain, then repeats on the remaining two-thirds. More details can be found here:

https://en.wikipedia.org/wiki/Ternary_search .

Tutorial :

<https://www.hackerearth.com/practice/algorithms/searching/ternary-search/tutorial/>

Binary Search is preferred over Ternary Search, for more details refer to this link:

<http://www.geeksforgeeks.org/binary-search-preferred-ternary-search/>

Most of the problems of ternary search can also be solved using binary search by some extra efforts but you still you should learn it!

problems on ternary search:

<https://www.codechef.com/problems/CPOINT>

<http://www.spoj.com/problems/KOPC12A/>

<http://codeforces.com/problemset/problem/578/C>

<http://codeforces.com/contest/865/problem/B>