

```

1  #include <bits/stdc++.h>
2  using namespace std;
3  #define ll long long
4
5  Ternary Search for Double:
6  double ternary_search(double l, double r) {
7      double eps = 1e-9; //error limit
8      while (r - l > eps) {
9          double m1 = l + (r - l) / 3;
10         double m2 = r - (r - l) / 3;
11         double f1 = f(m1);
12         double f2 = f(m2);
13         if (f1 < f2) //for min-range just reverse the condition
14             l = m1;
15         else
16             r = m2;
17     }
18     return f(l);
19 }
20
21 Ternary Search for Integer:
22 vector<int> a;
23
24 int ternary_search(int l, int r) {
25     while (r - l ≥ 3) {
26         int m1 = l + (r - l) / 3;
27         int m2 = r - (r - l) / 3;
28         int f1 = a[m1];
29         int f2 = a[m2];
30         if (f1 < f2) //for min-range just reverse the condition to >
31             l = m1;
32         else
33             r = m2;
34     }
35     return max(a[l] , a[l+1]); //change for min
36 }

```