

1 Template Padrão

Template padrão pra todo código, com as bibliotecas mais utilizadas e defines úteis.

```
1 #include <iostream>
2 #include <cstdio>
3 #include <vector>
4
5 using namespace std;
6
7 #define foreach(i, c) for(__typeof( (c).begin()) i=(c).begin(); i != (c).end(); i++)
8 #define all(x) (x).begin(), (x).end
9 #define fori(i, n) for(int i = 0; i < (n); i++)
10
11 typedef long long ll;
12 typedef pair<int,int> ii;
13 typedef vector<int> vi;
14 typedef vector<ii> vii;
15
16 #define INF
17 double const PI = 2 * acos(0,0);
18 double const EPS = 1e-10;
```

2 STL

2.1 misc

3 Graph

4 Geometry

5 Misc

5.1 Entrada

Parar quando as entradas forem 0 ou nulas:

```
1 int a, b;
2 while(scanf("%d%d", &a, &b), (a || b) {}
3 while(scanf("%d%d", &a, &b) == 2) {}
4 while(scanf("%d%d", &a, &b) != EOF) {}
```

5.2 Limites

- ≤ 10 : $O(n!)$, $O(n)$
- ≤ 18 : $O(2^n \cdot n)$
- ≤ 22 : $O(2^n \cdot n)$
- ≤ 100 : $O(n)$

- ≤ 400 : $O(n)$
- $\leq 2K$: $O(n \cdot \log_2 n)$
- $\leq 10K$: $O(n)$
- $\leq 1M$: $O(n \log_2 n)$
- $\leq 100M$: $O(n), O(\log_2 n), O(1)$