# Assign Mice Holes

```cpp
#include <bits/stdc++.h>

using namespace std;

int minTime(vector<int>& micePos, vector<int>& holesPos) {
    sort(micePos.begin(), micePos.end());
    sort(holesPos.begin(), holesPos.end());
    int time = INT_MIN;
    for (int i = 0; i < micePos.size(); ++i) {
        time = max(time, abs(micePos[i] - holesPos[i]));
    }
    return time;
}


int main() {
    int T;
    scanf("%d", &T);
    while (T--) {
        int N;
        scanf("%d", &N);
        vector<int> micePos, holesPos;
        for (int i = 0; i < N; ++i) {
            int mice;
            scanf("%d", &mice);
            micePos.push_back(mice);
        }
        for (int i = 0; i < N; ++i) {
            int hole;
            scanf("%d", &hole);
            holesPos.push_back(hole);
        }
        printf("%d\n", minTime(micePos, holesPos));
    }
    return 0;
}
```