

James's Streets

Problem ID: jamesstreets

James has been invited to an incredibly important, exclusive conference at Moc-Yap that is sure to boost his career. Since James wouldn't miss this for the world, he makes the 45 hour drive across the country to attend. In order to make it to the building where the conference is held, he will have to cross the street and there are no designated sidewalks. This is a problem as James has a deathly fear of crossing streets without sidewalks. The only way he would ever possibly feel comfortable crossing the street is if he had at least K seconds in which there was no car crossing as that is the fastest James can cross this street according to his calculations. Fortunately, even if a car reached James's path at exactly the K th second from when James starts to cross the street, or if James starts to cross the street right after a car crosses he will be safe. James plans to walk in a straight line, perpendicular to the street to minimize his distance as well. James also considered waiting until every car finished crossing before he started to cross the street, but there simply isn't enough time to wait. If it's impossible to make it on time, he will have to let his manager know of his extenuating circumstances, but he needs to do so quickly.

Input

The input consists of one test case. The input starts with a pair of integers, N and K . N is between 1 and 100,000 and K is between 1 and 50,000. N indicates the number of cars on the road and K indicates the amount of time in seconds James requires to cross the street. N integers follow, $c_1, c_2, c_3, \dots, c_N$, each between $-1,000,000$ and $1,000,000$, indicating the time, $|c_i|$, that car c_i takes to reach the path James is crossing. Each car has a negligible length in this scenario. A negative time indicates a car coming from the left, and a positive number indicates a car coming from the right. If $c_i = c_j$ where $i \neq j$, c_i and c_j can be treated as one car.

Output

Output the string "YES" if James can cross the street or "IMPOSSIBLE" if James cannot cross the street.

Sample Input 1

```
7 5
-10 -5 1 2 5 9 15
```

Sample Output 1

```
YES
```

Sample Input 2

```
5 10
2 5 -10 3 -19
```

Sample Output 2

```
IMPOSSIBLE
```