Thumb Up Thumb Down Cute Cat

Budi, a young inspired programmer, has just built a cute cats rating and discussion website. In this website, users may post photos of cat which they think looks cute, while other users may thumb up (score +1) or thumb down (score -1) the photos to represent whether they like or dislike the photos, respectively. Then, the website will show the aggregated sum, i.e. total thumb up minus total thumb down, for each photo.

This kind of rating website is very susceptible to attack and manipulation. Budi is not familiar with any cyber security practice, so that's where you come in.

Firstly, we should check whether an aggregated sum is valid. An aggregated sum S is considered as valid if and only if there are N voters (A users who thumbed up and B users who thumbed down, N = A + B) such that A - B = S. It seems easy to verify this. Unfortunately, the website does not store any information regarding the voters except the total number of voters, N.

Your task in this problem is to determine whether an aggregated sum is valid given N (voters) and S (the aggregated sum).

Input

Input contains two integers N and S ($1 \le N \le 10^9$; $-10^9 \le S \le 10^9$) representing the number of voters and the aggregated sum, respectively.

Output

Output in a line "YES" or "NO" whether the given aggregated sum in the input is valid or not, respectively.

Examples

input	**Example #1**
7 3	
output	
YES	
explanation	
There are 5 voters who thumbed up and 2 voters who thumbed down.	

input	Example #2
2 -1	
output	
NO	
explanation	
The only possible aggregated sums are: • 2 thumb up and 0 thumb down, aggregated sum = 2 - 0 = 2. • 1 thumb up and 1 thumb down, aggregated sum = 1 - 1 = 0. • 0 thumb up and 2 thumb down, aggregated sum = 0 - 2 = -2. There is no way the aggregated sum can be -1.	

input	Example #3
5 13	
output	
NO	
explanation	
The highest aggregated score which can be obtained is 5 (all voters thumbed up).	

input	Example #4
10 -4	
output	
YES	
explanation	
There are 3 voters who thumbed up and 7 voters who thumbed down.	

End of Problem