Problem A. Fadi and basketball

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

Fadi is a basketball coach where he has n students, he told Rami that the minimum height between his students is equal to a, and the maximum height between his students is equal to b, and the sum of heights of his students is equal to s.

Rami thinks that the description that Fadi gave him is wrong, and it is impossible to have such students with that description.

Rami is not sure about that, so he asked you for help.

Given 4 integer numbers n, a, b, s, you should tell him if Fadi's description is wrong for sure, or if it is possible to have n students with that description.

Input

The input will contain 4 integers n, a, b, s $(1 \le n \le 100)$ $(1 \le a \le b \le 250)$, $(1 \le s \le 25000)$.

Output

If it is possible to have n students with that description print "YES".

Otherwise print "NO".

Examples

standard input	standard output
5 2 4 13	YES
5 2 3 30	NO
1 4 4 4	YES