Moscow Dream

Problem ID: moscowdream
CPU Time limit: 1 second
Memory limit: 1024 MB
Difficulty: 1.6

Source: The 2019 ICPC Asia Danang Regional Contest

For many students, getting a ticket to The ICPC World Finals is a huge achievement, and *The 2019 ICPC Asia Danang Regional Contest* is a chance to make their dream come true. For some others, they just like to stretch their brains and solve interesting problems.

We – *the scientific committee* understand that, and we tried our best to set up a problemset that is interesting and diverse in both topics and difficulty. For a few months, we called for problem proposals from many people and received a easy problems, b medium problems and c hard problems. Using these proposals, we want to create a problemset which:

- Consists of **exactly** n problems,
- Has at least 1 easy problem,
- Has at least 1 medium problem,
- Has at least 1 hard problem.

Your task is to check whether it is possible to create such a problemset using the available problems.

Input

The input contains 4 integers a, b, c and n $(0 \leq a, b, c \leq 10, 1 \leq n \leq 20)$.

Output

Print 'YES' if it is possible to create a problemset satisfying above requirements, and 'NO' otherwise.

Explanation of sample data

- In the first sample, the committee do not have any easy problem. Thus, they cannot create a problemset with at least 1 easy problem.
- In the second sample, the committee can use 3 easy problems, 7 medium problems and 3 hard problems to create a problemset with exactly 13 problems.

Sample Input 1

```
0 3 3 5
```

Sample Output 1

```
NO
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Sample Input 2

```
4 10 6 13
```

Sample Output 2

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YES
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