Exams

In Chefland, there are X schools, and each school has Y students.

The year end results are in and a total of Z students passed the exams.

Assuming that all students appeared for the exams, find whether the number of students who passed in Chefland was **strictly greater** than 50%.

Input Format

- The first line of input will contain a single integer T, denoting the number of test cases.
- Each test case consists of three space-separated integers X, Y, and Z, as mentioned in the statement.

Output Format

For each test case, output on a new line, `YES`, if the total number of students who passed in Chefland was strictly greater than 50%, otherwise print `NO`.

You may print each character of the string in uppercase or lowercase (for example, the strings `YES`, `yEs`, `yes`, and `yeS` will all be treated as identical).

Constraints

- $1 \leq T \leq 2 \cdot 10^4$
- $1 \leq X \leq 5$
- $1 \leq Y \leq 50$
- $0 \leq Z \leq X \cdot Y$

Sample 1:

Input	Output
4 2 10 12 2 10 3 1 5 3 3 6 9	YES NO YES NO

Explanation:

Test case 1**:** The total number of students appeared were $2 \cdot 10 = 20$. The number of students passed were 12.

Thus, number of students who passed are 60%, which is strictly greater than 50%.

Test case 2**:** The total number of students appeared were $2 \cdot 10 = 20$. The number of students passed were 3.

Thus, number of students who passed are 15%, which is less than 50%.

Test case 3**:** The total number of students appeared were $1 \cdot 5 = 5$. The number of students passed were 3.

Thus, number of students who passed are 60%, which is strictly greater than 50%.

Test case 4**:** The total number of students appeared were $3 \cdot 6 = 18$. The number of students passed were 9.

Thus, number of students who passed are 50%, which is equal to 50%.