

Chef and NextGen

Chef is currently working for a secret research group called NEXTGEN. While the rest of the world is still in search of a way to utilize Helium-3 as a fuel, NEXTGEN scientists have been able to achieve 2 major milestones:

1. Finding a way to make a nuclear reactor that will be able to utilize Helium-3 as a fuel
2. Obtaining every bit of Helium-3 from the moon's surface

Moving forward, the project requires some government funding for completion, which comes under one condition: to prove its worth, the project should power Chefland by generating at least  $A$  units of power each year for the next  $B$  years.

Help Chef determine whether the group will get funded assuming that the moon has  $X$  grams of Helium-3 and 1 gram of Helium-3 can provide  $Y$  units of power.

Input Format

- The first line of input contains an integer  $T$ , the number of testcases. The description of  $T$  test cases follows.
- Each test case consists of a single line of input, containing four space-separated integers  $A, B, X, Y$  respectively.

Output Format

For each test case print on a single line the answer — Yes if NEXTGEN satisfies the government's minimum requirements for funding and No otherwise.

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

Constraints

- $1 \leq T \leq 1000$
- $1 \leq A, B, X, Y, \leq 1000$

Subtasks

Subtask #1 (100 points): Original constraints

Sample 1:

Input	
Output	
4 1 2 3 4 4 3 2 1 2 18 9 4 1 100 2 49	
	Yes No Yes No

Explanation:

**Test case 1:** Chefland requires  $A = 1$  units of power for the next  $B = 2$  years. In total, the moon must be capable of providing  $A \cdot B = 2$  units of power. There are in total  $X = 3$  grams of Helium-3 on the moon which is capable of providing  $X \cdot Y = 12$  units of power.  $12 > 2$ , so the project satisfies the minimum requirements for funding. Thus, the answer is **Yes**.

**Test case 2:** The total amount of power needed by Chefland is  $A \cdot B = 12$ , whereas the total that can be provided by the Helium-3 present on the moon is  $X \cdot Y = 2$ , which is insufficient to receive funding, so the answer is **No**.

**Test case 3:** The total amount of power needed by Chefland is  $A \cdot B = 2 \cdot 18 = 36$ , and the total that can be provided by the Helium-3 present on the moon is  $X \cdot Y = 9 \cdot 4 = 36$ , which is sufficient to receive funding, so the answer is **Yes**.

**Test case 4:** The total amount of power needed by Chefland is  $A \cdot B = 1 \cdot 100 = 100$ , and the total that can be provided by the Helium-3 present on the moon is  $X \cdot Y = 2 \cdot 49 = 98$ , which is insufficient to receive funding, so the answer is **No**.