CODECHEF
An unacademy Educational Initiative

Hello 1★ **hariprakash_s** ▼

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CCDSA | CODECHEF CERTIFICATION IN DATA STRUCTURES & ALGORITHMS   Upcoming Exam on **06ᵗʰ March**   KNOW MORE

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Contest Code: FEB222C   **Problem Code:** HELIUM3

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:

- Finding a way to make a nuclear reactor that will be able to utilize Helium-3 as a fuel

- 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 Input 1 📋
```
4
1 2 3 4
4 3 2 1
2 18 9 4
1 100 2 49
```

Sample Output 1 📋
```
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.

Status Correct Answer ✔   **Time** 0.18 sec   **Solution** 58232166   ✖

Sub-Task	Task #	Result (time)
1	0	AC (0.074824)
1	1	AC (0.177860)
Subtask Score: 100.00%		**Result - AC**
		Total Score = 100.00%

JAVA   💾 🗑   Code gets autosaved every second   ℹ   ⬇   ↗   ⚙

```java
2
3    import java.util.*;
4    import java.lang.*;
5    import java.io.*;
6
7    /* Name of the class has to be "Main" only if the class is public. */
8    class Codechef
9    {
10       public static void main (String[] args) throws java.lang.Exception
11       {
12           Scanner sc = new Scanner(System.in);
13           int n = sc.nextInt();
14           for(int i = 0; i < n; i++){
15               int a = sc.nextInt();
16               int b = sc.nextInt();
17               int x = sc.nextInt();
18               int y = sc.nextInt();
19
20               if(a * b <= x * y){
21                   System.out.println("Yes");
22               }
23               else{
24                   System.out.println("No");
25               }
26           }
27       }
28   }
29
```

23:35   ⟳

Open File   Run   Submit

Custom Input

```
4
1 2 3 4
4 3 2 1
2 18 9 4
1 100 2 49
```

Status Successfully executed   **Date** 2022-02-11 14:34:40   **Time** 0.220563 sec   **Mem** 38.976 kB   ✖

Input

```
4
1 2 3 4
4 3 2 1
2 18 9 4
1 100 2 49
```

Output

```
Yes
No
Yes
No
```

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