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Balls and Boxes

Problem Code: **BALLBOX**

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You have N balls and K boxes. You want to divide the N balls into K boxes such that:

- Each box contains ≥ 1 balls.
- No two boxes contain the same number of balls.

Determine if it is possible to do so.

Input Format

- The first line contains a single integer T — the number of test cases. Then the test cases follow.
- The first and only line of each test case contains two space-separated integers N and K — the number of balls and the number of boxes respectively.

Output Format

For each test case, output YES if it is possible to divide the N balls into K boxes such that the conditions are satisfied. Otherwise, output NO.

You may print each character of YES and NO in uppercase or lowercase (for example, yes, yEs, Yes will be considered identical).

Constraints

- $1 \leq T \leq 10^5$
- $1 \leq N \leq 10^9$
- $1 \leq K \leq 10^4$

Sample Input 1

```
4
3 4
30 3
2 2
1 1
```

Sample Output 1

```
NO
YES
NO
YES
```

Explanation

Submission Ends In

1 54 13
Hrs Min Sec

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Test Case 1: It is not possible to divide the 3 balls into 4 boxes such that each box contains ≥ 1 balls.

Test Case 2: One way to divide the 30 balls into 3 boxes is the following:
[5, 9, 16].

Test Case 3: It is not possible to divide the 2 balls into 2 boxes such that no two boxes contain the same number of balls.

Test Case 4: We can divide 1 ball into 1 box.

Author(s):	6★ jeevanjyot (/users/jeevanjyot)
Date Added:	5-09-2022
Time Limit:	0.5 secs
Source Limit:	50000 Bytes
Languages:	CPP17, CPP14, PYTH 3, C, JAVA, PYP3, PYTH, CS2, NODEJS, GO, JS, TEXT, PHP, kotlin, RUBY, rust, PYPY, PAS fpc, HASK, SCALA, swift, PERL, SQLQ, D, LUA, BASH, LISP sbcl, ADA, R, TCL, SQL, PRLG, FORT, PAS gpc, FS, SCM qobi, CLPS, NICE, CLOJ, PERL6, CAML, SCM chicken, ICON, ICK, ST, WSPC, NEM, LISP clisp, COB, ERL, BF, ASM, PIKE, SCM guile

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