Educational Codeforces Round 80 (Rated for Div. 2)

A. Deadline

2 seconds, 256 megabytes

Adilbek was assigned to a special project. For Adilbek it means that he has n days to run a special program and provide its results. But there is a problem: the program needs to run for d days to calculate the results.

Fortunately, Adilbek can optimize the program. If he spends x (x is a non-negative integer) days optimizing the program, he will make the program run in $\left\lceil \frac{d}{x+1} \right\rceil$ days ($\lceil a \rceil$ is the ceiling function: $\lceil 2.4 \rceil = 3$, $\lceil 2 \rceil = 2$). The program cannot be run and optimized simultaneously, so the total number of days he will spend is equal to $x + \left\lceil \frac{d}{x+1} \right\rceil$.

Will Adilbek be able to provide the generated results in no more than n days?

Input

The first line contains a single integer T ($1 \le T \le 50$) — the number of test cases.

The next T lines contain test cases – one per line. Each line contains two integers n and d ($1 \le n \le 10^9$, $1 \le d \le 10^9$) — the number of days before the deadline and the number of days the program runs.

Output

Print T answers — one per test case. For each test case print `YES` (case insensitive) if Adilbek can fit in n days or `NO` (case insensitive) otherwise.

input
3 1 1 4 5 5 11
output
YES YES NO

In the first test case, Adilbek decides not to optimize the program at all, since $d \le n$.

In the second test case, Adilbek can spend 1 day optimizing the program and it will run $\left\lceil \frac{5}{2} \right\rceil = 3$ days. In total, he will spend 4 days and will fit in the limit.

In the third test case, it's impossible to fit in the limit. For example, if Adilbek will optimize the program 2 days, it'll still work $\left\lceil \frac{11}{2+1} \right\rceil = 4$ days.