

Sherlock and Counting

Watson gives Sherlock two integers, n and k , and asks him to count the number of positive integer i 's such that:

$$i \cdot (n - i) \leq n \cdot k, \text{ and } i < n$$

Given q queries where each query consists of some n and k , print the number of possible i 's for each query on a new line.

Input Format

The first line contains an integer, q , denoting the number of times Watson queries Sherlock. Each of the q subsequent lines contains two space-separated integers denoting the respective values of n and k for a query.

Constraints

- $1 \leq q \leq 10^5$
- $1 \leq n, k \leq 10^9$

Output Format

For each query, print the number of i 's satisfying the given formula on a new line.

Sample Input

```
2
5 1
5 2
```

Sample Output

```
2
4
```

Explanation

Sherlock performs the following $q = 2$ queries:

1. The possible values of i satisfying Watson's formula for $n = 5$ and $k = 1$ are **1** and **4**. Because there are two such values, we print **2** on a new line.
2. The possible values of i satisfying Watson's formula for $n = 5$ and $k = 2$ are **1, 2, 3**, and **4**. Because there are four such values, we print **4** on a new line.