The power sum

https://www.hackerrank.com/challenges/the-power-sum/problem

Find the number of ways that a given integer X, can be expressed as the sum of the Nth powers of unique, natural numbers.

For example, if $X = 13$ and $N = 2$, we have to find all combinations of unique squares adding up to 13. The only solution is $2^2 + 3^2$.

Function Description

Write a *powerSum* function. It should return an integer that represents the number of possible combinations.

powerSum has the following parameter(s):

    X: the integer to sum to
    N: the integer power to raise numbers to

Input Format

The first line contains an integer X.
The second line contains an integer N.

Constraints
$1 \leq X \leq 1000$
$1 \leq N \leq 10$

Output Format
Output a single integer, the number of possible combinations calculated.

Example input	Expected output	Explanation
10 2	1	If $X = 10$ and $N = 2$ we need to find the number of ways that 10 can be represented as the sum of squares of unique numbers. $10 = 1^2 + 3^2$ This is the only way in which 10 can be expressed as the sum of unique squares.
100 2	3	$100 = (10^2) = (6^2 + 8^2) = (1^2 + 3^2 + 4^2 + 5^2 + 7^2)$
100 3	1	100 can be expressed as the sum of the cubes of $1,2,3,4$: $(1 + 8 + 27 + 64)$. There is no other way to express 100 as the sum of cubes.