

05 Hr **56** Min **08** Sec**Guidelines**

Coding Area

Editor | Compile & Run
History

Submissions

Feedback Form

Result

Graphs

Coding Area

A**B****C****D****E****F**

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Distint Partitions

+ Problem Description

Among the several path breaking contributions to Number theory by the famous Indian mathematician Srinivasa Ramanujan, his contribution to partitions is extensive and deep. A partition of a positive integer n , also called an integer partition, is a way of writing n as a sum of positive integers. Two sums that differ only in the order of their summands are considered the same partition. For example, 4 can be expressed as a sum of positive integers in the following ways: 1+1+1+1, 1+1+2, 1+3, 2+2, 4. Of these, only 1+3 and 4 use non repeating summands. Partitions using non repeating summands are called distinct partitions of n . There is no general formula for the number of partitions of an integer n and it is known that the partitions grow rapidly with n .

A k -distinct-partition of a number n is a set of k distinct positive integers that add up to n . Hence, if we look at 3-distinct partitions of 10, they are the partitions 1+2+7, 1+3+6, 1+4+5 and 2+3+5

The objective is to count all k -distinct partitions of a number that have at least two prime numbers in the elements of the partition

+ Constraints

$k < N < 200$, so that at least one k -distinct partition exists

+ Input Format

The input consists of one line containing of N and k separated by a comma

+ Output

One number denoting the number of k-distinct partitions of N that have at least two prime numbers in the elements of the partition.

+

+ Explanation

Example 1

Input

10,3

Output

2

Explanation : The input asks for 3-distinct-partitions of 10. There are 4 of them (1+2+7, 1+3+6, 1+4+5 and 2+3+5). Of these, only 2 have at least two primes in the partition (1+2+7, 2+3+5)

Example 2

Input

12,3

Output

2

Explanation : The input asks for 3-distinct partitions of 12. There are 7 of them (1+2+9, 1+3+8, 1+4+7, 2+3+7, 1+5+6, 2+4+6, 3+4+5). Of these 2 (2+3+7 and 3+4+5) have at least 2 primes. Hence the output is 2.

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