

05 Hr **41** Min
00 Sec**Guidelines**

Coding Area

Editor | Compile &
Run History

Submissions

Feedback Form

Result

Graphs

Coding Area

A

B

C

D

E

F

ONLINE EDITOR (F)

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.

Upload Solution [Question : F]

☐ I, **akash kandpal** confirm that the answer submitted is my own.[Choose a File ...](#)☐ Took help from online sources (attributions)

[CodeVita FAQ's](#)
[CodeVita Blog](#)
[Privacy Policy](#)
[Careers](#)

CONNECT WITH US



© 2018 Tata Consultancy Services
Limited. All Rights Reserved.

