## Partition function (HARD)

You need to output the number of distinct ways of representing $n$ as a sum of natural numbers (with order irrelevant) for given integer n .

## Input

$\mathrm{n}, 0 \leq \mathrm{n} \leq 10^{8}$

## Example

Input:
2013
Output:
6805659785780163657391920602286596663406217911

