A2 ==> Scourge

After having sold the revolutionary software product which he has made last summer, Ivancho quit work and focused on having fun. Recently, he got into the game "Scourge." There are two opposing teams - Justice and the Pirates. The Justice team uses mostly dragons to fight. Ivancho, though, finds them too "mythical" for his liking, so he's a member of the Pirates. There, the power of luck is used.

In this team two dice are thrown. The bigger number the player gets is N and the smaller (or equal) one - K. We define throwing force as the number of ways to represent N as a sum of prime numbers which are smaller than K, mod 1 000 000 007.

Formally said, if S is the number of sequences of prime numbers `p1 < p2 < p3 < … < pm` such that for each `pi  (1<=i<=m)` it is true that `pi < K и p1 + p2 + p3 + … + pm = N`, then the throwing force is `S mod 1000000007`.

Ivancho has the right to throw again a few times, so he wants to know if he should try again or the current throwing force is good enough for him to use it. Make a program `scourge`, which finds the throwing force for given N and K.

Note: 1 **is not** a prime number!

Input

At the only line of the file `scourge.in` there are two integers - *N* and *K*.

Output

At the only line in the file `scourge.out` your program must print the resulting throwing force.

Constraints

```
1 <= N <= 10000 (10^4)
1 <= K <= N
```

Examples

Input(scourge.in)	Output(scourge.out)
11 8	5
811 118	103995269

Explanation of the first example:

```
11 = 2+2+2+2+3 = 2+3+3+3 = 2+2+2+5 = 3+3+5 = 7+2+2
```