Little *Pippy* has got again a big bunch of boxes of chocolates on her 7-th birthday. Her parents are anxious about the health of her teeth, so they have allowed her to take only a limited number of chocolates; lets call this number N. They know that *Pippy* always shares her belongings with her friends, so they have fixed a sufficiently large number to make sure that all are happy. The chocolates are packed in several types of boxes. Each type of box contains a certain number of chocolates which is written above the box. Boxes of different types contain different numbers of chocolates. If a box contains k chocolate(s) we will call it type-k box. Now *Pippy* should take exactly N chocolates without tearing apart any box. Your job is to determine in how many ways *Pippy* can do this. You may assume that there are infinitely many boxes of each type from type-1 to type-N.

For example, lets assume that *Pippy* has been asked to take 3 chocolates. She can take only one type-3 box or she can take one type-2 box and one type-1 box or she can take 3 type-1 boxes.

Input

There will be several lines as input each containing a candidate N as described above. N can be any nonnegative number less than or equal to 5000. It may look like that N is very big for a little 7 year old girl; but remember she has lots of friends. And, who knows, may be you are one of her friends!

Output

For each N, print an integer on a single line indicating the number of ways *Pippy* can take N chocolates.

Sample Input

```
3
4
5
```

Sample Output

```
3
5
7
```