Pascal's Triangle

For a given integer K, print the first K rows of Pascal's Triangle. Print each row with each value separated by a single space. The value at the n^{th} row and r^{th} column of the triangle is equal to $n!/(r! * (n-r)!)$ where indexing starts from 0. These values are the binomial coefficients.

The Pascal Triangle

```
1
1 1
1 2 1
1 3 3 1
1 4 6 4 1
....
```

Input Format

A single line of input, integer K.

Constraints

$2 <= K <= 10$

Output Format

Output the first K rows of Pascal's triangle.

Sample Input

```
4
```

Sample Output

```
1
1 1
1 2 1
1 3 3 1
```