

Printing triangle

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[English version](#)

Given integer **n** print such a triangle:

```
.  
. .  
. . .  
7  
4 8      n-1  
2 5 9    n  
1 3 6 10 ...
```

Input

In the first and the only line there is an integer **n** ($n < 1001$).

Output

As above.

Example

Input:

17

Output:

16

11 17

7 12

4 8 13

2 5 9 14

1 3 6 10 15