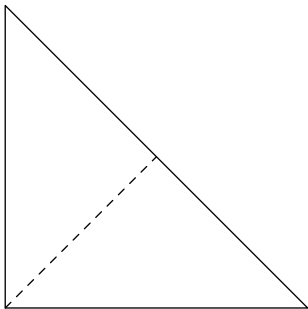


# Origami

Input file:            **standard input**  
Output file:         **standard output**  
Time limit:          1 second  
Memory limit:       256 megabytes

Vitya cut out an isosceles right triangle from paper. Then he folded it in half, as shown in the picture.



Then he folded it in half again, and again, and again... In total, he folded the paper triangle  $n$  times. How many squares formed by the crease lines will Vitya see when he unfolds the paper triangle?

## Input

The first line contains an integer  $n$  ( $1 \leq n \leq 40$ ).

## Output

Output the integer — the number of resulting squares.

## Example

| standard input | standard output |
|----------------|-----------------|
| 3              | 3               |

## Note

The paper folds from the example are shown in the picture.

