Problem

On a `N*N` grid, there was `N*N` cats, each cat sits on a cell of the grid. For example, when N = 2, we have the following grid (each character C denotes a cat):

```
+---+---+
| C | C |
+---+---+
| C | C |
+---+---+
```

Cats like to jumps around, so each minute, each cat jumps to one of the neighbouring cell. 2 cells are considered neighbours if they share 1 edge. Note that the cells at the corners only have 2 neighbours, cells at the edges have 3 neighbours and the other cells have 4 neighbours.

After T minutes, what is the expected number of unoccupied cells?

Constraints:

- 1 <= N <= 30
- 1 <= T <= 50

Input:

- 1st line: N and T

Output:

- 1st line: result, rounded to *exactly* 6 decimal places. Note that if you output less than 6 decimal places or more than 6 decimal places, your output will be judged as wrong.

Example:

Input

```
2 0
```

Output

```
0.000000
```

Input

```
2 1
```

Output

```
1.000000
```

Explanation

- In first test case, after 0 second, all the cats are still in their initial positions. So the expected value is 0.0.
- In the second test case, after 1 second, each cat can jump to one of the 2 neighbouring cells (note that they can not stay at the same cell). Below are some of the possible state of the grid after 1 minute:
  - Cat in `(1, 1)` jump to `(1, 2)`. Cat in `(1, 2)` --> `(1, 1)`. Cat in `(2, 1)` --> `(2, 2)` and cat in `(2, 2)` --> `(2, 1)`:

```
+---+---+
| c | c |
+---+---+
| c | c |
+---+---+
```

- The cat in cell `(1, 2)` and `(2, 1)` jumped to cell `(1, 1)`. Cat in `(1, 1)` and `(2, 2)` jumped to `(1, 2)`:

```
+---+---+
|cc |cc |
+---+---+
|   |   |
+---+---+
```

- There are 16 scenario in total, by counting the unoccupied cells and divide the result by 16, we get

the answer 1.0.