Problem B: Tight words

Given is an alphabet *{0, 1, ... , k}*, *0 <= k <= 9* . We say that a word of length *n* over this alphabet is *tight* if any two neighbour digits in the word do not differ by more than 1.

Input is a sequence of lines, each line contains two integer numbers *k* and *n*, *1 <= n <= 100*. For each line of input, output the percentage of tight words of length *n* over the alphabet *{0, 1, ... , k}* with 5 fractional digits.

Sample input

```
4 1
2 5
3 5
8 7
```

Output for the sample input

```
100.00000
40.74074
17.38281
0.10130
```