Dice

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

There are n people standing in a queue, and Meow is standing on the m^{th} place.

Every round, the person in front of the queue gets to throw a fair dice (1-6).

- If the number rolled is 1, the person in front of the queue wins.
- If the number rolled is $2, 3, 4$, the person in front of the queue will have to go the the back of the queue.
- If the number rolled is $5, 6$, the person in front of the queue will get kicked out from the queue.

If the queue is only left with 1 person, that person automatically wins. What is the probability of Meow wins?

Input

The input contains two integers, n, m ($1 \leq m \leq n \leq 1000$) – the number of people in the queue and the position of Meow in the queue (starting from 1).

Output

Print a real number representing the probability of winning, output your answer with accuracy up to 9 decimal places, rounded off. (Your answer will be accepted if it is within 1×10^{-9} of the judge's answer)

Example

standard input	standard output
2 1	0.444444444