

Day 4: Geometric Distribution II

Objective

In this challenge, we go further with geometric distributions. We recommend reviewing the [Geometric Distribution](#) tutorial before attempting this challenge.

Task

The probability that a machine produces a defective product is $\frac{1}{3}$. What is the probability that the **1st** defect is found *during the first 5 inspections*?

Input Format

The first line contains the respective space-separated numerator and denominator for the probability of a defect, and the second line contains the inspection we want the probability of the first defect being discovered by:

```
1 3
5
```

If you do not wish to read this information from stdin, you can hard-code it into your program.

Output Format

Print a single line denoting the answer, rounded to a scale of **3** decimal places (i.e., **1.234** format).