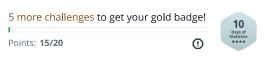




Day 4: Geometric Distribution II ☆



Problem Submissions Leaderboard Editorial 🖰 Objective In this challenge, we go further with geometric distributions. We recommend reviewing the Geometric Distribution tutorial before attempting this challenge. The probability that a machine produces a defective product is $\frac{1}{3}$. What is the probability that the 1^{st} 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).

```
Python 3
     # Enter your code here. Read input from STDIN. Print output to STDOUT
2
3
     # Enter your code here. Read input from STDIN. Print output to STDOUT
4
     p1, p2 = [int(i) for i in input().split()]
5
    n = int(input())
6
7
     p = p1/p2
8
     q = 1-p
9
10
     # Calculate Geometric Distribution
     print (round(sum([(q^{**}(n-x))*p for x in range(1, 6)]),3))
11
```