###实验1

n = int(input())

answer = 1

for i in range(1, n+1):

answer \*= i

print(answer)

###实验2

import math

right = 27

left = 1

answer = 0

while right - left > 0:

middle = float((right + left) / 2)

if math.pow(middle, 3) > 27:

right = middle

elif math.pow(middle, 3) < 27:

left = middle

else:

answer = math.fabs(middle)

break

print(answer)

#实验3

def weightcal(coins, start, end):

sum = 0

for i in range(start,end+1):

sum += coins[i]

return sum

def findFalseCoin(coins, start, n):

if(start == n):

print("Fake coin:{}".format(start)); return

if((n - start + 1) % 2 == 0):

weight1 = weightcal(coins, start, n//2)

weight2 = weightcal(coins, n//2 + 1, n)

if(weight1 == weight2):

print("Fake coin is not found"); return

elif weight1<weight2:findFalseCoin(coins, start, n//2)

else:findFalseCoin(coins, n//2 + 1, n)

else:

min = coins[start]

flag = 0

for i in range(start, n+1):

if coins[i] < min:

flag = 1

min = i

break

elif coins[i] > min:

flag = 1

min = start

break

if flag == 1:

print(min)

coins = [2, 2, 2, 2, 2, 2, 1, 2, 2, 2, 2, 2, 2, 2, 2]

findFalseCoin(coins, 0, len(coins)-1)

#实验4

import random

import math

S = 21.0

N = 10000000

C = 0

for i in range(N):

x = random.uniform(2.0, 3.0)

y = random.uniform(0.0, 21.0)

if y <= math.pow(x, 2) + 4 \* x \* math.sin(x):

C += 1

I = C / N \* S

print(I)