#Simpson’s 1/3rd rule without using function named simpson(simple program)

def f(x):

y= 1/(x\*\*2)

return y

x0 = float(input("Enter lower limit of integration: "))

xn = float(input("Enter upper limit of integration: "))

n = int(input("Enter number of sub intervals: "))

h = (xn - x0) / n

sum = f(x0) + f(xn)

for i in range(1,n):

k = x0 + i\*h

if i%2 == 0:

sum = sum + 2 \* f(k)

else:

sum = sum + 4 \* f(k)

sum = sum \* h/3

print("Integration result by Simpson's 1/3rd rule is : %0.6f" %(sum))