

```
#Mengimport Library
import numpy as np
import matplotlib.pyplot as plt

# Fungsi yang akan di integralkan
def func(x):
    return (x**2)* np.exp(-x)

#Batas integrasi
a=1.0
b=10.0
n=10
```



```
#Simpson's Rule
if n % 2 == 0:
    n+=1
x= np.linspace(a,b,n)
dx=(x[-1]-x[0])/(n-1)

#Menghitung Integral Menggunakan Metode Simpson
hasil = func(x[0])+func(x[-1]))

for i in range (1,n-1,2):
    hasil +=4*func(x[i])

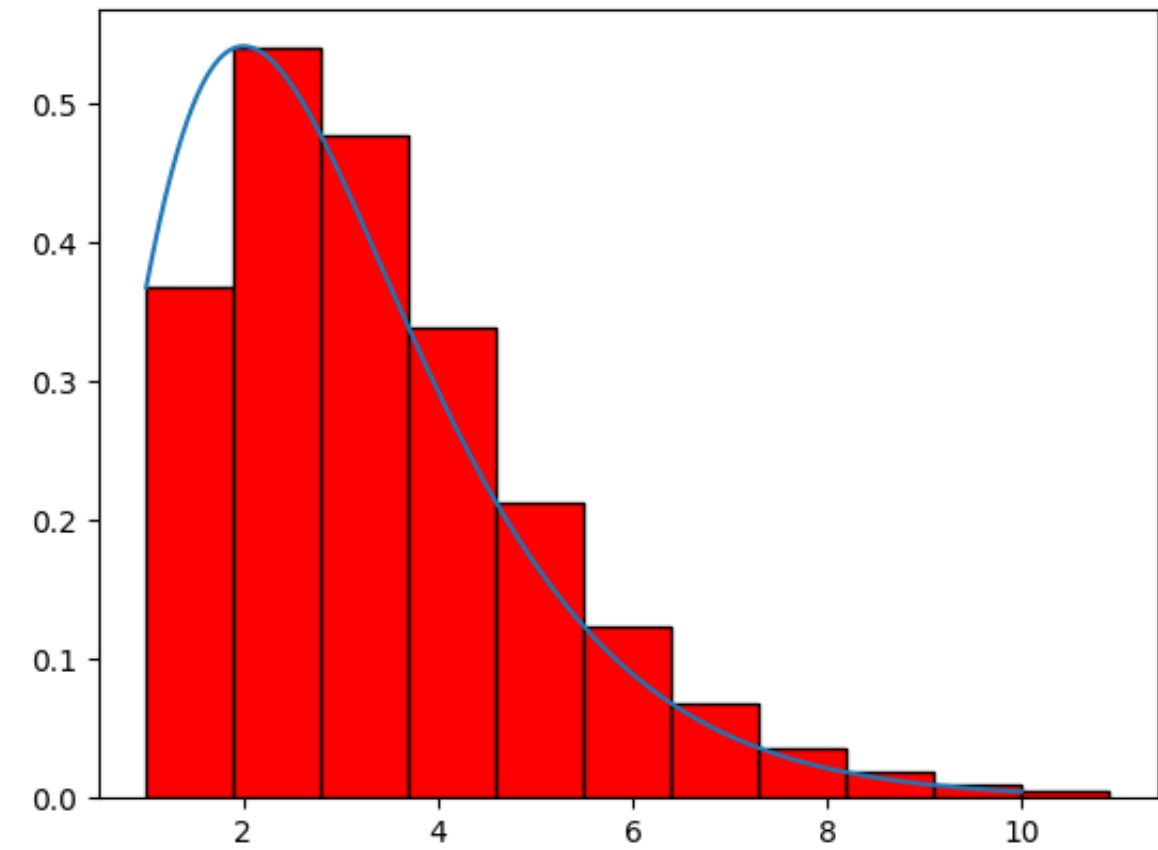
for i in range(2,n-2,2):
    hasil +=2*func(x[i])

hasil*=dx/3

#visualisasi grafik dan bar
xp=np.linspace(a,b,1000)
plt.plot(xp,func(xp))

for i in range(n):
    plt.bar(x[i],func(x[i]),align='edge',width=dx,color='red',edgecolor='black')
plt.show()
print(hasil)
```





1.8331824035157698