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

#Integral
def func(x):
    return x**-3 + np.cos(x)
a = 1.0
b = 5.0
n = 1000
```

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#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='bla
plt.show()
print(hasil)
```

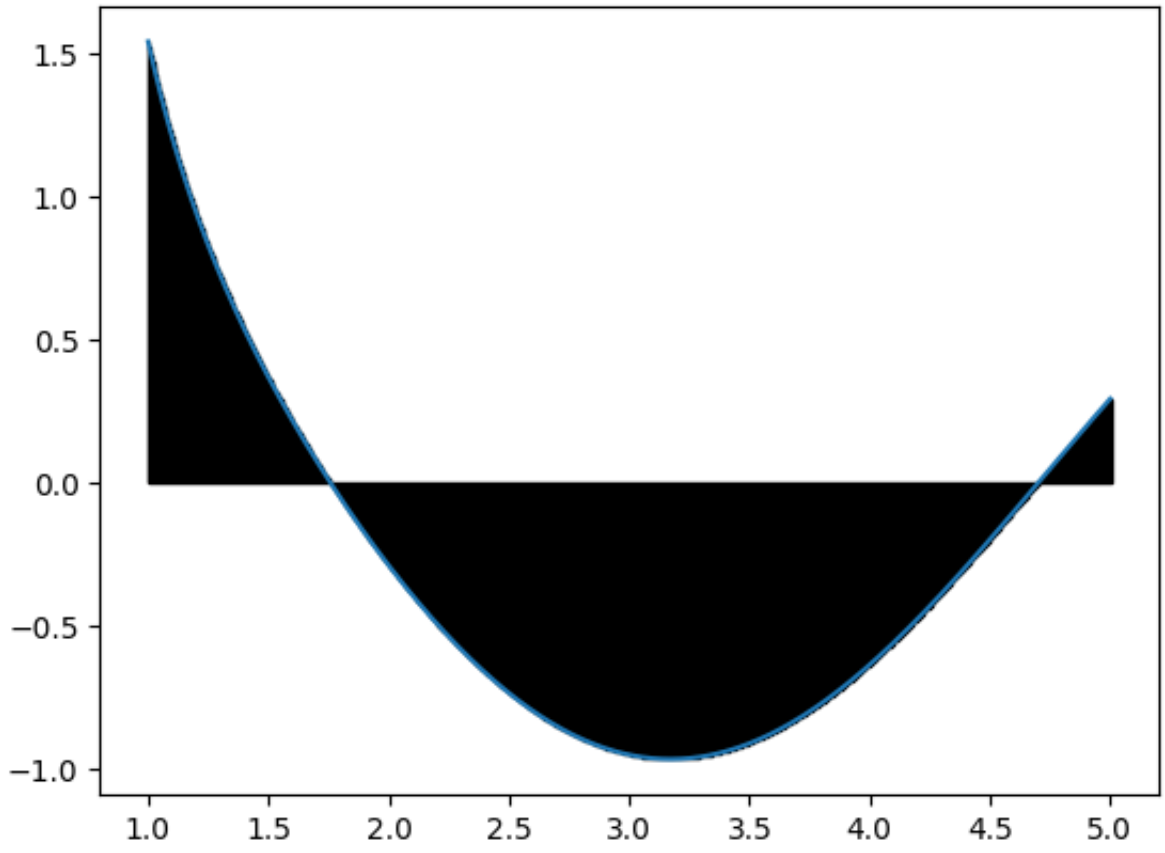


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-1.3218517973792094
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