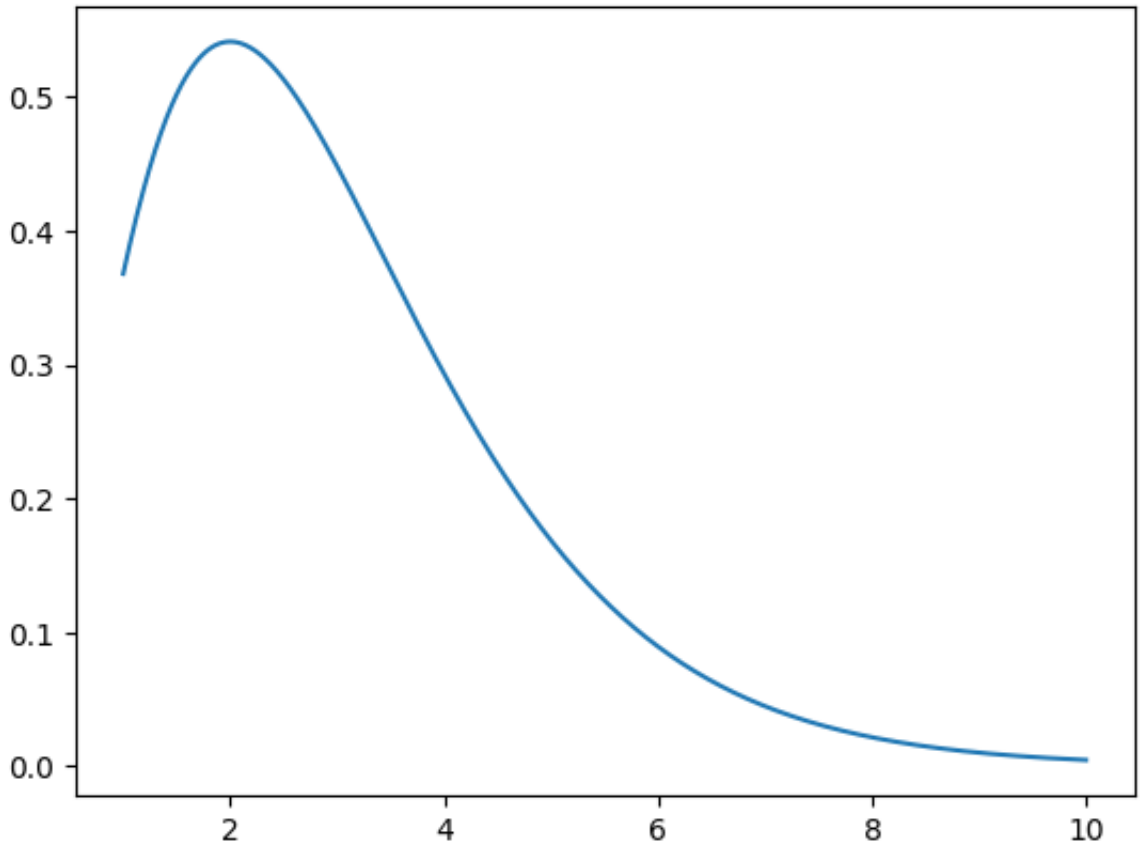
```
# Mengimpoprt Library
import numpy as np
import matplotlib.pyplot as plt
```

```
#Integral
def func(x):
    return (x**2)*np.exp(-x)
a = 1.0
b = 10.0
```

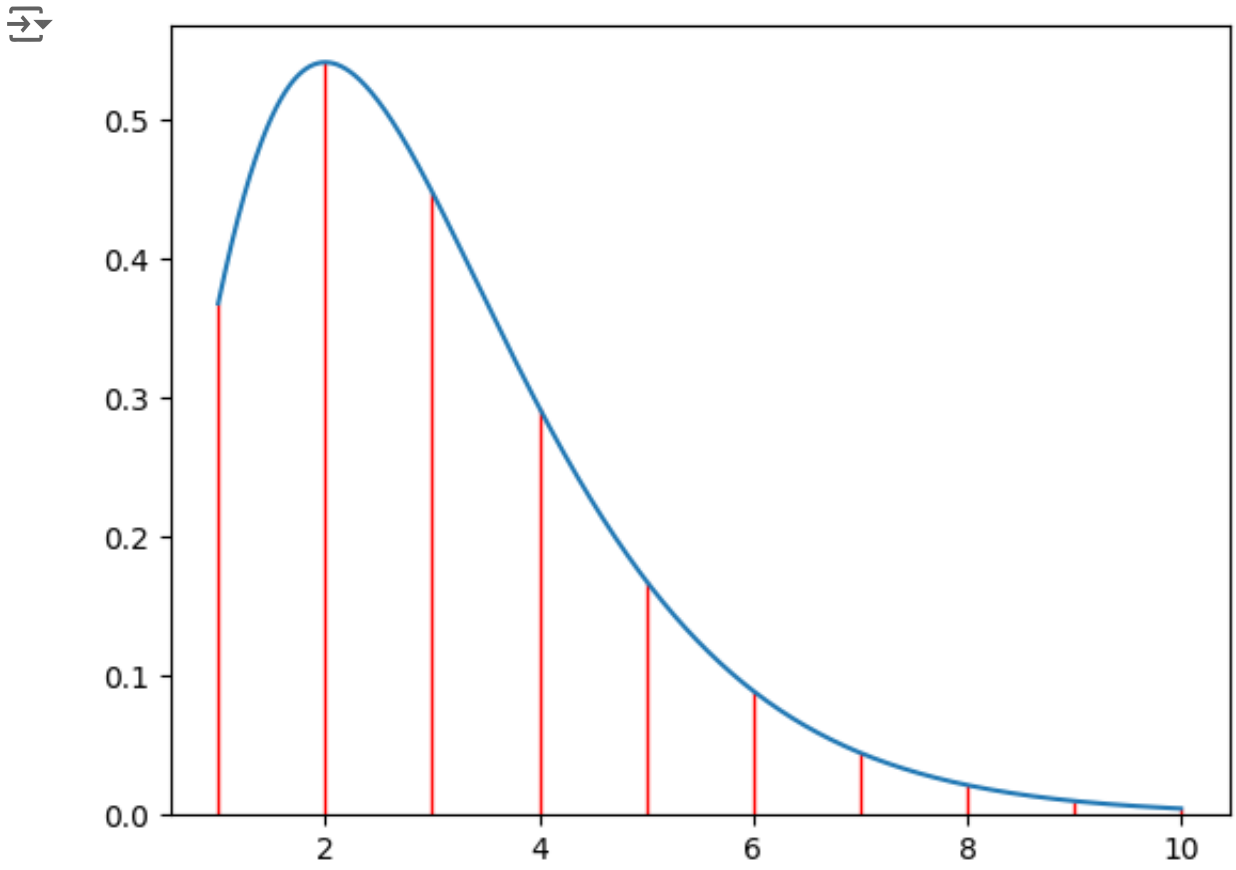
```
# Metode Trapezoid
n = 10                # Jumlah grid
dx = (b - a) / (n - 1)
x = np.linspace(a, b, n)

sigma = 0
for i in range(1, n - 1):
    sigma += func(x[i])

hasil = 0.5 * dx * (func(x[0]) + 2 * sigma + func(x[-1]))

print(hasil)
```

```
1.8025164595168974
```

```
xp =np.linspace(a,b,1000)
plt.plot(xp,func(xp))
plt.show()
```



```
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= 0.000001, edgecolor='red

plt.show()
```



```
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=0.000001, edgecolor='red'

plt.fill_between(x,func(x),color='yellow',alpha=0.5)

plt.show()
```