



```
import numpy as np

def f(x):
    return np.sin(x) + 4*x

def trapezoidal_rule(a, b, n):
    h = (b - a) / n

    integral = (f(a) + f(b)) / 2

    for i in range(1, n):
        x_i = a + i * h
        integral += f(x_i)

    integral *= h

    return integral

a = 0
b = np.pi
n = 100

result = trapezoidal_rule(a, b, n)

print("Pradipta Banerjee, 21BCS2279\n")
print(f"Approximate value of integral would be: {result}")
```



Pradipta Banerjee, 21BCS2279

Approximate value of integral would be: 21.73904430606615