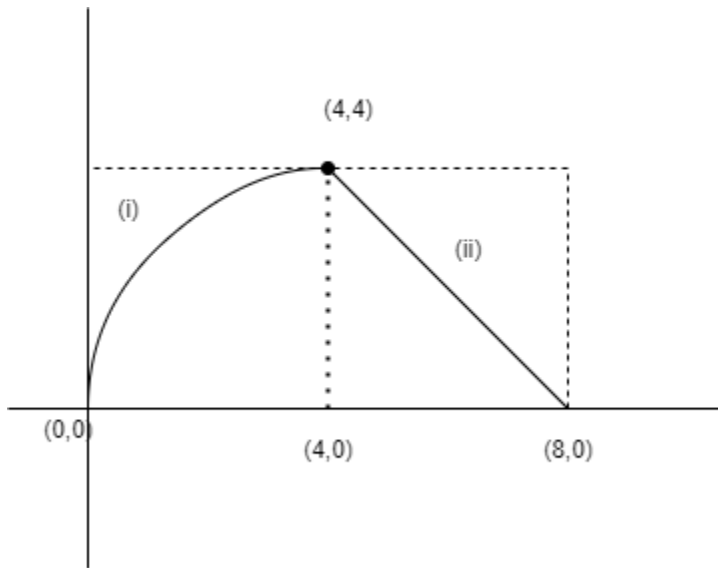## Lab 4 Assignment
Deadline: 23 November (Monday, 11:55pm)

1. Find the Integral of $x^2 e^x \ln(x)$ limit x=0 to x=2 using monte carlo integral. Use 100, 1000, 5000, 10000 data points and print the integral value and error estimate. Also draw error vs n graph. Here n= number of points.

2. Find the area under the curve below using the Monte Carlo **Integral**.

Equation of curve - (i) is : $y^2 = 4x$

Equation of (ii) is: $y = 8 - x$

Simulate this area for n=100,1000,5000,10000 points. For each value of n, print the area and estimated error of integral.