1.(1 pt) Approximate $\int_0^{\pi/2} \sin(x)dx$ by computing $L_f(P)$ and $U_f(P)$, using the partition $\{0, \pi/6, \pi/4, \pi/3, \pi/2\}$.

Your answers should be accurate to at least 4 decimal places.

$L_f(P) =$ _____

$U_f(P) =$ _____

You may include a formula as an answer.

2.(1 pt) Approximate $\int_0^{\pi/2} x\sin(x)dx$ by computing $L_f(P)$ and $U_f(P)$, using the partition $\{0, \pi/6, \pi/4, \pi/3, \pi/2\}$.

Your answers should be accurate to at least 4 decimal places.

$L_f(P) =$ _____

$U_f(P) =$ _____

You may include a formula as an answer.

3.(1 pt) Approximate the definite integral

$$\int_3^6 |5-t|\,dt$$

using midpoint Riemann sums with the following partitions:

(a) $P = \{3, 5, 6\}$. Then midpoint Riemann sum = _____

(b) Using 3 subintervals of equal length. Then midpoint Riemann sum = _____

4.(1 pt) Use the Midpoint Rule to approximate the integral

$$\int_{-3}^6 (-1x + 7x^2)dx$$

with n=3.

5.(1 pt) Given the following integral and value of n, approximate the following integral using the methods indicated (round your answers to six decimal places):

$$\int_0^1 e^{-5x^2}dx, n = 4$$

(a) Trapezoidal Rule

(b) Midpoint Rule

(c) Simpson's Rule

6.(1 pt) Use Simpson's Rule and all the data in the following table to estimate the value of the integral $\int_5^{11} y\,dx$.

x	5	6	7	8	9	10	11
y	4	0	9	5	2	-9	0