a) Here, 
$$f(x) = e^{-3x}$$
  
 $(a, b) = (0, 2)$   
 $n = 9$ 

$$A = \frac{b-a}{n} = \frac{2-0}{4} = \frac{1}{2} = 0.5$$

117 6 0 201	1 . C 1	4 6 6	All was	the state of the s			
Riemann Sum	Left R.S		Right R.S		Mille R.S		
[2,-1,2n]	Cr	f(er)	er-	f(en)	Cr	fen	
0-0.5	0	1	0.5	0.2231	0:25	0.4724	
0.5-1.6	0.5	6.2231	1.0	0.0498	0.岁	0.1059	
1.0-1.5	1.0	0.0498	1.5	0.0111	1.52	0.0235	
1.5-2.0	1.5	0.0111	2.0	0.0025	1. 六2	0.0652	
2fcr	1.284		0.2865		0.6065		
ax Zf (en)			0.1433		0.3033		
	1						

$$f(x) = \frac{0.5}{2} \left[ 1 + (2x0.2231) + (2x0.498) + (2x0.0111) + 0.6025 \right]$$

$$= 0.393$$

(Any)

b) Here, 
$$f(x) = \frac{1}{\sqrt{x^2+1}}$$
 $(a_1b) = (1/3)$ 
 $n = 6$ 
 $Ax = \frac{b-a}{n} = \frac{3-1}{6} = 6$ 

Remark Such Left R.S. Right R.S. middle R.S.

 $[x_{n-1}, x_n]$ 
 $C_n$   $f(c_n)$   $c_n$   $f(c_n)$   $c_n$   $f(c_n)$ 

1, 2 1 0, 307 2 0.3333  $q.5$  0.4781

2,3 2 0.3233 3 0.189 2.5 0.2453

3, 4 3 0.189 4 0.1240 3.5 0.151

4,5 4 0.1246 5 0.0691  $q.5$  0.1042

5, 6 5 0.0891 6 0.0697 5.5 0.0733

6, 7 6 0.0697  $a$  0.0599 6.5 0.0602

2  $f(c_n)$  1.5104 0.85 $a$  1.1161

4  $a$   $f(c_n)$  1.5104 0.85 $a$  1.1161

1  $a$   $f(c_n)$  1.5104 (2x0.3333) + (2x0.189) + (2x0.1240) + (2x0.0891) + (2x0.0891) + (2x0.0891)

C) Hene, 
$$f(x) = \frac{1}{1-\ln x}$$

$$(a,b) = (3,5)$$
 $m = 4$ 

$$\therefore \Delta x = \frac{b-a}{n} = \frac{5-3}{4} = \frac{2}{4} = 0.5$$

Riemann Sun Left R.8 Right R.8 middle R.8

[Kn-1, 127] en  $f(en)$  en  $f(en)$  en  $f(en)$ 

3,3.5 3 -10.1407 3.5 -3.9563 3.25 -5.5974

3,5,4 3.5 -3.9563 4 -2.5887 3.75 - 3.1079

4,4.5 -1.9837 5 -1.6409 4.75 -1.7917

 $f(en)$  -18.6698 -10.1697 -12.7345

Ax  $f(en)$  -9.3348 -5.0849 -6.3673

$$= \frac{0.5}{2} \left[ -10.140 \times + \left\{ 2 \times \left( -3.9563 \right) \right\} + 2 \left( -2.588 \times \right) \right]$$

$$= - \times .210 \quad (AM)$$

d) Here, 
$$f(x) = Sin(x) cos(x^{2})$$
  
 $(a,b) = (0,1)$   
 $n = 4$   
 $Ax = \frac{b-a}{n} = \frac{1a-0}{4} = \frac{1}{4} = 0.25$ 

1				A STATE OF THE PARTY OF THE PAR		AND DESCRIPTION OF THE PROPERTY OF THE PROPERT	
ľ	Riemann Sum	Left	2.5	Right R.S		Middle R.S	
	[27-1127]		fer)				A(e)
1	0,0:25	o A	0000	0'25	0.2469	0.125	0.1243
-	0.25,0.50	0.25	0.2469	0.50	0:4645	0.575	0.3627
	0.50,0.75	0.50	0-4645	0. 75	0.5 766	0.625	0.5410
-	0.75,1	0.75	0.5765	2.1-	6.4546	0.875	0.834
	5.f(2)	4901.288 8		1.7726		1.5818	
	125A(2)	86.3	322 6	0.4357		0.3955	
•	Grand Control of the	and the second s	and an extrement special review which is mission passing a command to read the option of the design of the following			The state of the s	and Advicement along and a region of the state of the sta

$$= \frac{0.25}{2} \times \left[ 0 + (2 \times 0.2469) + (2 \times 0.4645) + (2 \times 0.4546) + (2 \times 0.4546)$$

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e) Here, 
$$f(x) = \sin(x^{1})$$
  
 $(a,b) = (0,1)$   
 $x = 5$   
 $3ax = \frac{b-a}{2} = \frac{1-0}{5} = \frac{1}{5} = 0.2$ 

_							A STATE OF THE PARTY OF THE PAR
-	Riemann Sun	Laft Ris		Right R.S		Middle RS	
	[27-1, 2,]		f(er)		F(er)	2r	A(en)
	0,0.2	٥	0	0.2	0'04	0,1	0.01
	0.2,0.4	0.2	0.04	014	0.12	0.3	0.0899
_	0.4,0.6	6.4	0.12	0.6	0.3523	0.5	0.2474
	0.6,0.8	0.6	0.3523	810	0.5972	6.7	0.4766
*	0.8,10	0.8	0.5972		0'8415	6.9	0.7243
	zf(en)	1.	1395	1.98	31	1.5422	
	ansf(en)	0.2279		0.3962		0.3084	
				-		The second secon	

$$T_{h} = \frac{0.2}{2} \times \left[ 0 + (2 \times 0.09) + (2 \times 0.15) + (2 \times 0.9) + (2 \times 0.59) + (2 \times 0.84) \right]$$

$$= 0.312$$