7 2														
73														
		3 _2												
16.	9.	θe	cos s	Ø										
	dy	3θ ²	-28	C0520	\int_{0}^{3}	7 - 10	1005	A - A3	-70	5 (. 5				
	N			0	(0	10	Coso		L) MA 3				
2.4		rezx												
64.	y=	J. 45%	In t	dŧ										
	dy =	In	erk	(ze ^z	×) -	Ind	Max.	(3	290>					
								- 4)						
	(9	Xe Xe	_	Я	04TX								
					U									
12.		2x		n (x										
И														
	7 0	ex_	0	s(x)	\	1.	_ 1							
	LX	-	Co	x)2	137)	(1+	300							
	9	x =	(s(x	۲۶.)	+	20.	. 1	٠ ٩, ٦	dy				
					` <i>'</i>		> C0	2 (X.	رود ا	1×				
	d	*	L	e -	- (0	s (xf	34)						
				_		X+3		_						
				21	<i>b</i> 5 (XTS	7							

30-	(1	o X	- 2,	-2x)	de											
			,,,	,	<i>u</i> ()-											
		(* .		(-7×										
		120	- 1	x -	\int_{0}^{2}	-2X	dx									
	- 2	ey	dx	-	3	e-24	dx									
					_	*)										
							7									
=	2	e't	32	e-2x	+	C										
93.		肾	1.		ton 0		2									
)0	(1	t e) se	cθ	dt								
			11-	1	H			1			U \					
	•			to				$\int_{\mathbb{R}}$	(1	te)5	ec 0	1	1 1 H		
			du	= 2	ecr	θ				+ (U	1,	<i>)</i>	V		
								2	J	+ (2					
			dθ	7	2	_			, ,	- 0	U	1, 0				
				•)(C	0		= (0				
		b =	0 :	1	U=	0		-	1.	te	-	1				
		O :	10/4		US			1.1	e							
			9													

48. $\int_{0}^{\sqrt{1000}} 2x e^{x^{2}} \cos(e^{x^{2}}) dx$ Let $v = e^{x}$ $\int_{0}^{\sqrt{1000}} 2x e^{x^{2}} \cos(e^{x^{2}}) dx$ $\int_{0}^{\sqrt{1000}} 2x e^{x^{2}} dx$ $\int_{0}^{\sqrt{1000}} 2x e^{x^{2}} dx$ $\int_{0}^{\sqrt{1000}} 2x e^{x^{2}} dx$ $\int_{0}^{\sqrt{1000}} 2x e^{x^{2}} dx$ \int_{0}^{100
Let $v = e^{x}$ $dv = 2xe^{x^{2}}$ $dx = Sin v = 0$ $2xe^{x}$ $2xe^{x}$ $= 0 - Sin 1$
$\frac{dv}{dx} = 2xe^{x^2}$ $= \sin v \left[0 \right]$ $\frac{dv}{2xe^{x^2}} = 0 - \sin v$
$\frac{dv}{dx} = 2xe^{x}$ $= \sin v \left[0 - \sin v \right]$ $= \cos v \left[0 - \cos v \right]$
$\frac{du}{2xe^{i}} = 0 - S_{in} $
$\frac{\partial u}{\partial x} = \lambda y$ $= 0 - S_{in} $
X=VIATO -= U= elato = - Sin1
= 10
X:0 - D 0 = 6
So Jax
) Ite
$=\int \frac{1}{1+e^{2}} dx \qquad \int \frac{1}{1+e^{2}} du$
J (+e) J v v-1
- 1 du
Let U= 1+ 12 (64)
$\frac{\partial u}{\partial v} = \frac{A}{v} + \frac{B}{(v-1)}$
dx = A(y-1) + R(y)
$G = \{ A = -1 \}$
J-1 + 1 du
(0-1)

$$= -\ln U + \ln (U-1) + C$$

$$= -\ln (1+e^{x}) + \ln (e^{x}) + C$$

$$= -\ln (1+e^{x}) + \ln (1+e^{x}) + C$$

$$= -\ln (1+e^{x}) + \ln (1+e^{x}$$

92. J x2x'	*		
J 1 + 1 x 2			
let v = 2	X	1 CKB de	
		SKD de 7xh(2) or	
In(v) =)	(1 ln (2)		
I du	= 1x h(2)	2 h(1) S 1+V	U
ax ax	= 2 x (n(2) U	7 m(2) In (140) 1	
2	2x 1, (2) 2x2	2 ln/2) ln (1+ 2))+C
	= do	<i>(</i> • • • • • • • • • • • • • • • • • • •	
	1xh(2)0		
, [[long dysdu	
100. [l 2 ln 10 1	ogw× dx	loge Zdx=du	
J		$= \frac{dx}{x} = \log e \log du$	
lot v= log x		2 cos e 10 10 g 10 f u du	
lige loget		= 2 (In 10)2 U1	
		= (ln lo) (logx)2 e	In h)2
114. y= +500		- (In 10)? (loge)2-0	((L (o)
Inly) = In (tot)			
(n/y) = (t /n (t)			
1 dy - 1 1 12			
15 dy = 1 200 h (t)	ŧ	dy ()	15
dy = 1 ln(t)+	t.y ->	dy = (1 ln(t) + (7) dt = (15/6 ln(t) + (7) E)	t

116- y= x sinx			
Inly) = Sinx In(x)			
y dy = (osx lalx) + Si	nX		
dy = (cosx lab) +	Sinx) y		
dy = (cosx lulx) t	Sinx) X Sux		
ax .	*		
136. a) f(x)=ex			
•	C(1/2)		
Concave p W	hen f (d) > 0		
$f'(x) = e^x$			
$f''(x) = e^{+} $			
b) o cach the	$e^{(\ln a + \ln b)/2} \cdot (\ln b - \ln a) < \int_{\ln a}^{\ln b} e^x dx$	$dx < \frac{e^{\ln a} + e^{\ln b}}{2} \cdot (\ln b - \ln a).$	
BC tangent			
= la a + lab			
7	(, , , ,) (
y=e(x- ma+ (nb)	t e ((na+lnb)/2		
Aren AEFB ehr + club (hb-ln a)			
2 (hb-ln a)			

Are	ia A	BCD															
		(CD)															
1/2	(In a	- lab	+ 101	2 - (n a	+2)) e (lux + lub	+ (46)	٤ (ا	lab-la	~)							
	- e	(ha 1	- lnb)	' ¹ · ((lu a	t Inb	.)										
So	Sin	e	the	av	ea	AB	CD	<	Aren	bel	ow (Curve	from	n X	elna	to	X=lnb
2	Area	AE	FD														
ell	9 + 6	6)/2	Clab	-Ina)	12 5	Inb In P	dx .	< e"	2 z	ehr	· (h	b-	Ina,)			
c)	e ⁽	ln a t	tInb.	1/h (lub-	- Ina) {	e*	100 C	< e	na t	elub	(h1	o - lu	19		
	= e	,		∠ (ela b	-e		/(In.	b - n .	4) C	2	<u> </u>					
	- e	la (ab	2	6-9 (106-10	na)	-e1	2 2	e (n= :	= a (X	e =	(d						
		که ک															
			(do h														

143. a) y=lnx	b) h x intersects x at x = e
y'= 1	- Slope of & will always be }
	Stope of Inx= & for x>e is } <1
x = e	- Stepe of tangut > stope of lox for xze
y = (n 1	They don't interse of fir xre and & lies above
y'= 1 e	slope \(\frac{1}{2} \) \(\text{Slope lix} \)
5-1 - 1 X-e = =	So / lux CX
	C) ln x 2 /2 -o e lax < x -> Inx Ce
5-1=x=-	
y - ×	d) la x 2 x - > e ((ax) < e x -> x 1 ce x
	= Xx Cex
7.5	
F	
5- 1- cos x	15. 20. 20. x-1 hx-sintex
	$= 9 - \frac{16x}{x-70} = 2 - \frac{1}{x} - \pi \cos x$ $= 2 - \frac{16}{x} = 2 - \frac{1}{x} - \pi \cos x$ $= 1 - \frac{16}{x-70} - \cos x$
$= \int_{0}^{\infty} \frac{\sin x}{2x}$ $= \int_{0}^{\infty} \frac{\cos x}{2}$	= 2 (b_
= 1	X->0 - Cos x 1+10
2	F-16

01	0													
100	x-1	, \-	(To .	-x)	tan;	ς .								
	X>(T	h)	(2	/										
	- l	_	In	_	5.									
	- L-7(1	(h)	(%	-x).	(osx									
	- 0			_										
	= 2 X-7(10	m (7/2	-X)	Sinx									
					/(X10,								
	$=$ θ		,											
	7-7((2)	-(8/1X)	- (70	(12-X	(05	X						
					- Sin >	(
	0													
	= l~ X-7(9	5 /17	1-	- (TV)	1 -X)	Cit	*							
	Λ 1	(I)												
	= -	(a)	_7	υ/) <i>ι</i>	of 70	=1								
				rij c	2									
12.	9 3	sind -	-				30-	. 2		3× –				
	J-3	A	_					X-7	,	3 [×] - 2 [×] -	_			
	0	U	Sh	b ,										
	- l D->0	cosb	3	ln 3				=)	2	3' 2'	(n 3			
								X	-7 o	2 ^x	102			
	= (n3							-	n3					
									(12					

32	1	lognX							
	1-x->	102 (Xt3)							
	0	1							
	= X->00	× h(2)							
		(xt3) ln(3)							
		(xt3) (nCs)							
	= l_	(Xt3) h(3)						
	X -	x lu(2)							
	5 2	(xt3) h(x h(z) ln3 ln2	D 092 3	.)					
	K-3-	(N C							
38	0								
50	X->0	+ (Inx -	In Sinx)						
	L	lnx -	9 In	Sin x					
	X-70°	lnx -	X-)) [†]						
	_ &_	∞ 0							
to.	1	13×+1							
	X-20+	X	- Sinx/						
	= X-20	(3 x 8in	x + Sinx	-x					
	, 9	3 Sinx t	3x Lis	x + cos x	_ 1				
	X-20		Sinx +	× cos×					
	0_	3 (os*	L 2 Cacx	+ 3× Sin	(-8:47	1			
	X-> 0+	J 65/-	7 > 005/	1 // 5.4/	-	= 2	= 3		
		Co	$s \times + (c$	3×-×8	nx				

45.	1	et +	t												
	L-300	et-1													
	= 2	et	+	Lt											
		0.	۱ ا												
	-1 e	+ +	2 =	2		et et	= [
	t'	t		t	Ð	et									
<u>E</u> 4	. 2	((,'/(x-	e)			62	. 2	_ /	γ¹	ΤΙ,	1/4			
31	X-De	t Clax	()				00	X-	- (\ \ \ \ \ \	1-2				
	= (\n	1/2	- e					L_		2 km (xx+1)/x			
	- ~						- <i>></i>	(-xa		2					
							-	(->c e e e *	× 7	In(2	Xn)				
								2	(,	(/ x2.	H)				
							-	K-30	0	· ×	(V)	1.1.			
							=	K-70	2x	CXT	1)-	W 41)		
							_	l		(x)	2) -4v	-1			
								l K	∞ <u> </u>	X2	tyx-	—' . LY	= [
											V				
							-	e'	= e						

11	0_	(, ,		60	0 (Vx		
po.	1- x-0+	Sux . In	×	08	2 (VX X-20t (Sin	×)	
	Lim				2 X->0 [†] \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		
		*			X->0+ \ 81/	×	
				-	X X X X X X X X X X X X X X X X X X X		
					X-30 COIX		
				= ((+ = 1		
92	, &->- -	2 × + 5×-7	4 *		80. 2 (1	x3 x	$\frac{a}{(z+\frac{\sin bx}{x})=0}$
		_	$\begin{pmatrix} q^{\times} \\ 2^{\times} \end{pmatrix} \frac{1}{5^{\times}}$	- <i>y</i>	1 tar 2x .	$\frac{2x}{x^3} + \frac{a}{x^2}$	+ Sinka b)
	÷ >-«	2* +	X	X-	$-\left(\frac{2x}{x^3} + \frac{2x}{x^3}\right)$	X ²)	
		1 - 2×+4	7× 5*	=	2 tan 0	= 0	
	- l X->-	2 × +4 5×			U		
	2-0	1 - 2×	= (=0		2 (2 to x20 /x2	0	
				=0	2 (2 tg	+6)=0	
					if $x=0$, ∞		
					It X=0,00		
					the equotion	will be zen	
				if	2+a=0 1=0		
				a-	=-2		
				6.	=0		

10	0-1		2						
G >	l-((++)	= e'						
	l ak		(1+5) ^k					
	X->0	K->0	C.L.E.	,					
		- le-	~ [(I+	(£)					
		= e'							
		•							
L 9	(1,1)	11,2							
60 .	f(x) = e	1/.2 _							
	{\x)= e	1x. 2							
	e/x2=								
	011	T(X)-0							
	f'(0) -1	(o). Z	l l						
	= 0								