		8 4.2	
	so Inixi	MathCity.org Merging Man and math	
	Irignometric	functions	ns .
	Sina de	- Cosx + c	
	Scosada =	Sinx + c	
	J Sec2xdx =	tanx + c	
	J Cosecx Cotx =	-Cosec x, +c	
	Secretaria =	Secx + C	
	$\int \cos e^2 x dx =$	-Cotx + c	
	Stanz =	In Isecal +c	
	$\int \cot x =$	In IsinxI+c	
	Jsecxdx =	In I seex + tanx1+c	
	J Cosecx.da =	In Cosecx - Cotx	
4	$\sigma_{1}^{\prime\prime}\sigma_{2}^{\prime}\sigma_{3}^{\prime\prime}$		
	nvense Jrugon Functions	ometric	

sin-12

Sec'x + c $\int \frac{dx}{x\sqrt{x^2-1}}$ = tan'x + c $\int \frac{dx}{\sqrt{\alpha^2 - x^2}}$ $=\frac{1}{\alpha}\tan(\frac{x}{\alpha})+c$ $\int \frac{dx}{x\sqrt{x^2-a^2}}$ $\frac{1}{a}$ Sec(x) + c Hyperbolic junctions. z Coshx + c Sinhx dx Sinho + c (Coshx dx (sech'x du = tanhu+c (Cosechiad = - Cotha + c (Sechxtanhxdx = - Sechx + c [Cosechacothada = -cotha + c Stanhada = Inlcoshal+c 1 Cothada 2 ln Isinhal + C

	(10) 4.2			
(d)	$\alpha = \frac{\sinh^{-1}x}{2} = \ln(x + \sqrt{x^2 + 1}) $			H
	+ X			,
	$\frac{dx}{x^2-1} = (osh^{-1}x = ln(x+\sqrt{x^2-1})$			p di angene anno
	$\frac{\sinh'(x)}{a} = \ln(x + \sqrt{x^2 + a^2})$			
	$\frac{\cosh(x)}{a} = \ln\left(\frac{x + \sqrt{x^2 - a^2}}{a}\right)$	and the second s		
J V	$a^2 - x^2 dx$ of $\int \frac{1}{\sqrt{a^2 - x^2}} dx = \lambda = a \sin \theta$	The state of the s		N ma
	$\int \sqrt{a^2 + x^2} dx = 0$ $x = a sinh \theta$ $x = a sinh \theta$ $x = a tan \theta$,
	$\int \sqrt{x^2 - a^2} dx \qquad on \qquad \int \frac{1}{\sqrt{x^2 - a^2}} dx$ $x = a \cos \theta \qquad x = a \sec \theta$			
	$x = a \cosh \theta$ $x = a \sec \theta$			
	$\frac{\cos^2 x}{2} = 1 + \cos 2x$			
	$\frac{\sin^2 x}{2} = 1 - \frac{\cos 2x}{2}$			
	$\frac{Cosh20}{Cosh^{2}} = \frac{Cosh^{2}\theta + Sinh^{2}\theta}{2}$ $\frac{Cosh^{2}\theta}{2} = \frac{1 + Cosh2\theta}{2}$			<u>;</u>
	Sinho = Cosh20-1 2	TELEVICE		
	$(osh^2x - Sihh^2x = 1$			
	$\int \frac{1}{a^2 - x^2} dx = \frac{1}{2a} \ln \left \frac{a + x}{a - x} \right $			1
	$\int \frac{1}{x^2 - a^2} dx = \frac{1}{2a} \ln \left \frac{\pi - a}{\pi + a} \right $	e established		
	J x2-a2 xa	To the second se	The state of the s	

<u> </u>	
WWW.mathcity.org Exencise No 4.2	ere za
Evaluate Sections 1 + x2	grander og
let Z = tan'x	
$dz = \int dx.$ $-\int e^{z} dz = e^{z} + C$	
= e + c Ans:	
$\int \sqrt{\sin x} \cos x dx$ $let \sin x = Z$ $\cos x dx = dz$, etter seet e
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
$\frac{3}{2} \frac{3}{(\sin x)^{3/2}} + c$	
$= \frac{3}{3}\sqrt{\sin^3z} + C$,
$= \frac{2\sqrt{\sin^3x} + cAns}{3}$	
$\int \frac{dx}{1 + \sqrt{x + 1}}$	And the second s
$\frac{1}{100} = \frac{1}{100} = \frac{1}{100}$	The Stranger Stranger St.

	so that make			-
هلا دو داشت بیده بیدور	Z' = x + 1, then	I training		
<u> </u>	2zdz = dx +			
THE PERSON NAMED TO	$= \int \frac{2z}{1+z} dz$			
	J1+Z			
er e	$\iint_{\mathbb{R}^2} \frac{2}{1+2} dz$			
	J 1+ ZJ		d de	
	= 2z -2ln(1+z)		<u> </u>	-
			anners produced process	-
	= $2\sqrt{x+1}$ - $2\ln(1+\sqrt{x+1})$ Ans.	-140		<u>}</u>
			-	+
	∫ <u>Cos 20</u> d0 Sin 20			_
	J Sin820			
	, (cos ⁶ 20 . cosec ² 20d0			
) sin ⁶ 20	A STATE OF THE STA		-
	2 (Cot ⁶ 20 · Cosec ² 20 do		4	ļ
	let.			+-
	Cot 20 = Z	777		-
	$-2 \cos^2 20 d\theta = dz$		1	+
	Cosec 20 do = - dz		1	-
1	20		-	4-
:	$\frac{z}{\sqrt{\frac{z^6-dz}{a^6}}}$		14	_
	5 ~			
	$\frac{z}{2} = \frac{1}{2} \int \frac{z^2 dz}{z^2}$			
and the state of t				_
	$\begin{array}{cccccccccccccccccccccccccccccccccccc$		4	-
	2 7			-
	$= -\frac{1}{4} \cot^{2} 2\theta + c AnS$			-
				-
	$\int \frac{2x+1}{(x^2+x+1)^{5/2}} dx$		-	+
	$\int (x^2 + x + 1)^{\frac{n}{2}}$		-	
		And the state of t	-	1

		
	let $\chi^2 + \chi + 1 = Z$	
de la companya de la	(9x+1)dx = dz	
	$= \left(\frac{dZ}{Z^{5/2}} \right)$	
) Z ³ /2	
and the second s	$=$ $\left(\frac{z^{-5/2}}{z^{-4}}\right)$	A CONTRACTOR OF THE PARTY OF TH
		And the second s
The state of the s	$= Z^{-3/2} = 3 - 2$ $-3/2 = 3Z^{3/2}$	
	$-\frac{3}{2}$ $3Z^{2/2}$	
	$-\frac{2}{3} (x^2 + x + 1)^{3/2}$ Ans.	
2 10 mm / to 10 mm	$3(x^2+x+1)^{3/2}$	The state of the s
	Stan't Sec 40 do	Section of the sectio
	1et	A CONTRACTOR OF THE CONTRACTOR
	tano = Z	
	$Sec^2\theta d\theta = dZ$	All Control of the Co
	BO	TOTAL OF BRIDE
	= Stan'o (1+tan'o) . Sec'odo	And the second second second
	on substitution	
	$= \left(z^{2} (1+z^{2}) dz \right)$	7
	$= \left(\left(z^2 + z^4 \right) dz \right)$	American Commence
jit		Ectivity and provide many
	$= \underline{Z}^3 + \underline{Z}^S + \underline{C}$	
	3 5 5	
	$= \frac{\tan^3\theta + \tan^5\theta + c Ans}{3}$	
200	3 5	
		and the second s
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(14) 4.2	
Exercise NO 4.2	in the annual que
Evaluate	
$\int \frac{dx}{\sqrt{a^2 + x^2}}$	
$\int \sqrt{a^2 + x^2}$	
$x = a t a n \theta$	
$d\kappa = \alpha \operatorname{Sec}^2 d\theta$	
$= \int \alpha \operatorname{Sec}^2 \theta d\theta$ $\int \sqrt{\alpha^2 + \alpha^2 \tan^2 \theta}$	
$\int \sqrt{a^2 + a^2 \tan^2 \theta}$	
= (G sec ² odo a seco	
) a seco	
= f.secodo	
\cdot	
In sec A + tanol	
	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1
$x = tan\theta$	
a	and the second s
1 + tan'o = Sec'o	
$1 + x^2 = Sec^2\theta$	
$\frac{a^2 + x^2}{a^2} = Sec^2\theta$	
$\sqrt{\alpha^2 + x^2} z \operatorname{Sec} \theta$	
$m{1}$	
en to sidelifica + x² Ans.	

	$\int \frac{dx}{\sqrt{x^2 - \alpha^2}} $ MathCity.org Merging Man and maths	Charle de La
	Merging Man and maths	Printed Carry
	x = aseco	en - 100 en 110
	dx = aSecotonodo	Arten ng
	= (asecotanodo	·
	$\sqrt{a^2 \sec^2 \theta - a^2}$	AF1A - 244
	= Secotario do	uetelona.ii
34		
	$\int \operatorname{Sec} \Theta d\Theta$	
The state of the s		~~~
	In Seco. + tanol + c	PW - MANA
	$\frac{x}{a} = \sec \theta$	
	$tan^2\theta = Sec^2\theta - 1$	
	$= \frac{\chi^2}{2} - 1$	
	a ²	
	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	*******
	a²	arir uta yan
	$tan\theta = \sqrt{x^2 - a^2}$	
d d	a	-
	$= \ln \left \frac{x}{a} + \sqrt{x^2 - a^2} \right $	
The state of the s	la al	
	$= \ln \left \frac{x + \sqrt{x^2 - a^2}}{a} \right Ans.$	e Frankerya.
	' 4 1	
	$\int tanx dx$	
		mining.
Committee of the Commit	= Sinzelx Cosx	الدريسون الم
44		

	= $\ln \tan \frac{\pi}{4} + \tan \frac{\kappa}{2}$ $1 - \tan \frac{\pi}{4} \tan \frac{\kappa}{2}$
	= $\ln \tan(\pi/4 + x/2) + c$ Ans.
	= $In / tank n/q + 2/2)/+ 2 Hns.$
- 6	(Cosecx.dx
	\[\begin{aligned} \left(\text{Cosecx - Cotx} \right) dx \\ \end{aligned} \] \[\left(\text{Cosecx - Cotx} \right) dx \]
	= In Cosecx - cotx + c
	= ITI Cosecx - Colx TC
	$= \frac{\ln \left \frac{1}{\sin x} - \frac{\cos x}{\sin x} \right + c}{\left \frac{\sin x}{\sin x} \right }$
	Sinx Sinx
	$= \ln \left 1 - \cos x \right + c$
	$= \ln \left(\frac{2 \sin^2 x/2}{2 \sin^2 x/2 \cos^2 x/2} \right) + c.$
	= $\ln \tan x/2 + C$ Ans.
	=
7	$\left((\alpha x^2 + 2bx + c)^n (\alpha x + b) dx \right)$
N. C.	$= \frac{1}{2} \left((9x^{2} + 2bx + c)^{2} (29x + 2b) dx$
	n+1
	$\frac{1}{2} \frac{(ax^{2} + 2bx + c)^{n+1}}{n+1} + c$
C	$= \frac{1}{2(n+1)} (ax^{2} + 2bx + c)^{n+1} + c Ans.$
	2(h+1)
8	$\int_{1} \frac{1+x}{1-x} dx$
	Let

	(3) 4.2	
	· · · · · · · · · · · · · · · · · · ·	
M	ultiplying and dividing by VI+X.	
	$= \int \frac{\sqrt{1+x} \times \sqrt{1+x}}{\sqrt{1+x}} dx$	
	$= \int \frac{\left(\sqrt{l+x}\right)^2 dx}{\sqrt{l-x^2}}$	10
	$= \int \frac{1+x}{\sqrt{1-x^2}}$	
	$= \int \frac{1}{\sqrt{1-x^2}} dx + \int \frac{x}{\sqrt{1-x^2}} dx$	
	$\frac{2}{2} \sin^{2}x + \frac{1}{(-2)} \int \frac{-2x}{\sqrt{1-x^{2}}} dx$	
	$\frac{2 \sin^{-1} x - 1 \left((1 - x^{2})^{-1/2 + 1} \right) + c}{2 \left(-\frac{1}{2} + 1 \right)} + c$	
	$\frac{1}{2} \sin^{-1} x - \left(1 - x^{2}\right)^{1/2} + C$	
	$= \sin^{-1}x - \sqrt{1-x^2} + c \text{Ans}.$	11
	$\int \frac{dx}{a + \sqrt{bx + c}}$	
	$a + \sqrt{bx + c} = t$ $\frac{1(bx + c)^{-1/2}bdx}{2} = dt$ $\frac{2}{dx} = \frac{2(bx + c)^{1/2}dt}{b}$	
	$dx = \frac{2}{b}(t-a)dt$	
	$\therefore \sqrt{bx+c} = t-a$	1.
	$\frac{2}{b}\int \frac{t-9}{t}dt$	

	U 4.2	
	$= \underbrace{\frac{2}{b} \int (\iota - 9/t) dt}_{\text{b}} \text{ www.mathcity.org}$	
	= 2 [t - a Int] + c Ans.	# 00 hours to be an
	$= \frac{2}{b} \left[\frac{a + \sqrt{bz + c} - a \ln(a + \sqrt{bx + c})}{b} \right] + c$	menter tel di la parti que pres per cipa.
10	$\int \frac{dx}{(1+x^2)\tan^{-1}x}$	
	tan'x = t	
	$\frac{1}{1+x^2}dx=dt$	
	$\frac{1}{t} dt$	The state of the s
•	= ln1t.1+c	The second secon
	= ln/tan-'x/+c Ans.	
11	(Sinx + Cosx dr	
	J sinx - Cosx	
	$\int_{a}^{b} \int_{a}^{b} \int_{a$	
	$(\cos x + \sin x) dx = dt$	A Company of the Comp
	$= \int \frac{(\cos x + \sin x) dx}{(\sin x - \cos x)}$	
	$\frac{z}{\int \frac{1}{L} dt}$	and the second s
	$\frac{3}{z}$ $ln t +c$	
-	$= \ln \sin x - \cos x + c \text{Ans}.$	To care the second seco
12	$\int \frac{\sin\sqrt{x}}{\sqrt{x}} dx$	
and the second s	J Vz	

	(20) 4.2	
		an indicate all have a relationship to the matched of the Marie of the Marie of the Control of t
manuf control and the second s	1 dx = dt	
	$\frac{1}{2\sqrt{x}}dx = dt$	
	$= 2 \left(\sin \sqrt{x} \cdot 1 \right) dx$	
	$= 2 \int \sin \sqrt{x} \cdot \frac{1}{2\sqrt{x}} dx$	
	$= 2 \left(\sin \sqrt{x} \right) dx$	
	$= 2 \int \sin \sqrt{x} \cdot \frac{1}{2\sqrt{x}} dx$	
	= 2 Sint · dt	<u>l</u> 5
	= -2 Co(t + C	
	$= -2\cos\sqrt{x} + c \text{ Ans}.$	
13	$\left(\sqrt{e^{2x}} + e^{3x} dx\right)$	
The state of the s		
	$= (\sqrt{e^{2x}(1+e^x)}) dx$	
	J	
**	$= \left(\left(1 + e^{x} \right)^{1/2} e^{x} dx \right)$	
	$= \frac{(1+e^{x})^{2}}{\sqrt{2}+1} + C$	
	1/2 + 1	
9	$\frac{2}{1+e^{\chi}} + c Ans.$	
	3	
14		
	$ \frac{dx}{e^{x} + e^{-x}} $	16
) e~ + e ~	numerical state of the state of
*** ****	$-\frac{dx}{e^{x}+\frac{1}{e^{x}}}$	Maria de Caración
		Section of the sectio
, we will be a second of the s	$\frac{1}{e^{2x}+1} \frac{e^{x}}{e^{2x}+1}$	
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lnx = t

 $\int_{X} dx = dt$

J Cost dt

and being supposed by a granted water of desired to the		,	=
of the finest time representation of	= Sint + c	***	
	= Sin(lnx) + c Ans.	m (Net Most and States) - acceptions to the	Y office of the state of the st
and the second section of the second section of			
. 17	$\int \frac{2x+5}{\sqrt{x^2+5x+7}} dz$		Hillian Constanting
-	$\int \sqrt{x^2 + 5x + 7}$	and the second	
	$= \left(\left(x^2 + Sx + 7 \right)^{\frac{1}{2}} \left(2x + S \right) dx$		man thought or prints a
	-1/ ₂ +1	er tokke og tokke	
	$= \frac{(x^2 + 5x + 7)^{-1/2} + c}{-1/2 + 1}$	TOTAL CONTRACTOR	10 700 majony
Mark Harrison and Market State	THE RESERVE OF THE PARTY OF THE		
A.	$= 2(x^2 + Sx + 7)^{1/2} + C Ans.$		
18			
#40	$\int \frac{(x+2) dx}{\sqrt{2x^2+8x+5}}$	Andrew Control	
and the party of the second second		**************************************	
	$\frac{2x^2 + 8x + 5}{4x + 8x + 5} = t$		
7 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	$\frac{(4x + 8)dx = dt}{4(x + 2)dx = dt}$		
	(x+2)dx = dt		
	4		
	=> 1 (dt		
	$\Rightarrow \frac{1}{4} \int \frac{dt}{\sqrt{t}}$		**********
	$=\frac{1}{11}\int_{0}^{1}(t)^{-1/2}dt$		7
	9)		
accommon to the second	$= \frac{1}{4} \frac{(t)^{1/2}}{t} + c$		
	And the second s		
	= 1 + 1/2 + C	To the second se	
		The control formation of the control	
	$=\frac{1}{2}\sqrt{2x^2+8x+5}+c$ Ans.		٠
		-	
19	1 1 2 2		
	$\int \frac{\sqrt{z^2 - a^2} dz}{x^4} dx$		Angele Control of the
	Section in the section of the sectio	1	,

= a Cosho = a Sinhodo Va2Cosho - a2 . asinhodo a4Cosho $\frac{a^2}{a^4} \left(\frac{\sinh^2 \theta}{\cosh^4 \theta} \right) d\theta$ = 1 (tanh'o- Sechodo $\frac{1}{a^2}$ $\frac{\tanh^3\theta}{3}$ $= \frac{1}{3a^2} \tanh^3 \theta$ $\frac{1}{39^{2}} \left(\frac{\chi^{2} - 9^{2}}{\chi} \right)^{\frac{3}{2}} + C$ $(x^2 - a^2)^{3/2} + c$ Ans. (Cosez Sin3x dz 20 z (Cos'x sin2x sinxdx = (Cos6x (1 - Cos2x) sinxdx sinx dx = -dt $= - \left(t^6 (1 - t^2) dt \right)$ (t'-t')dt

$$\frac{1}{7} = \frac{1}{9} + C$$

$$= -\left(\frac{1}{7} - \frac{1}{9}\right) + C$$
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$$\int \tan^{3}x \cdot \operatorname{Sec}^{3}x \cdot dx$$

$$= \int \tan^{3}x \cdot \operatorname{Sec}^{3}x \cdot dx$$

$$= \int \cot^{3}x \cdot \operatorname{Sec}^{3}x \cdot dx$$

$$= \int \cot^{3}x \cdot \operatorname{Sec}^{3}x \cdot dx$$

$$= \int \cot^{3}x \cdot \operatorname{Cosec}^{3}x \cdot dx$$

$$= \int \cot^{3}x \cdot \operatorname{Cosec}^{3}x \cdot dx$$

$$= \int \cot^{3}x \cdot (1 + \cot^{3}) \operatorname{Cosec}^{3}x \cdot dx$$

$$= \int \cot^{3}x \cdot (1 + \cot^{3}) \operatorname{Cosec}^{3}x \cdot dx$$

$$= \int \cot^{3}x \cdot \cot^{5}x \cdot \operatorname{Cosec}^{3}x \cdot dx$$

$$= \int \cot^{3}x \cdot \cot^{5}x \cdot \operatorname{Cosec}^{3}x \cdot dx$$

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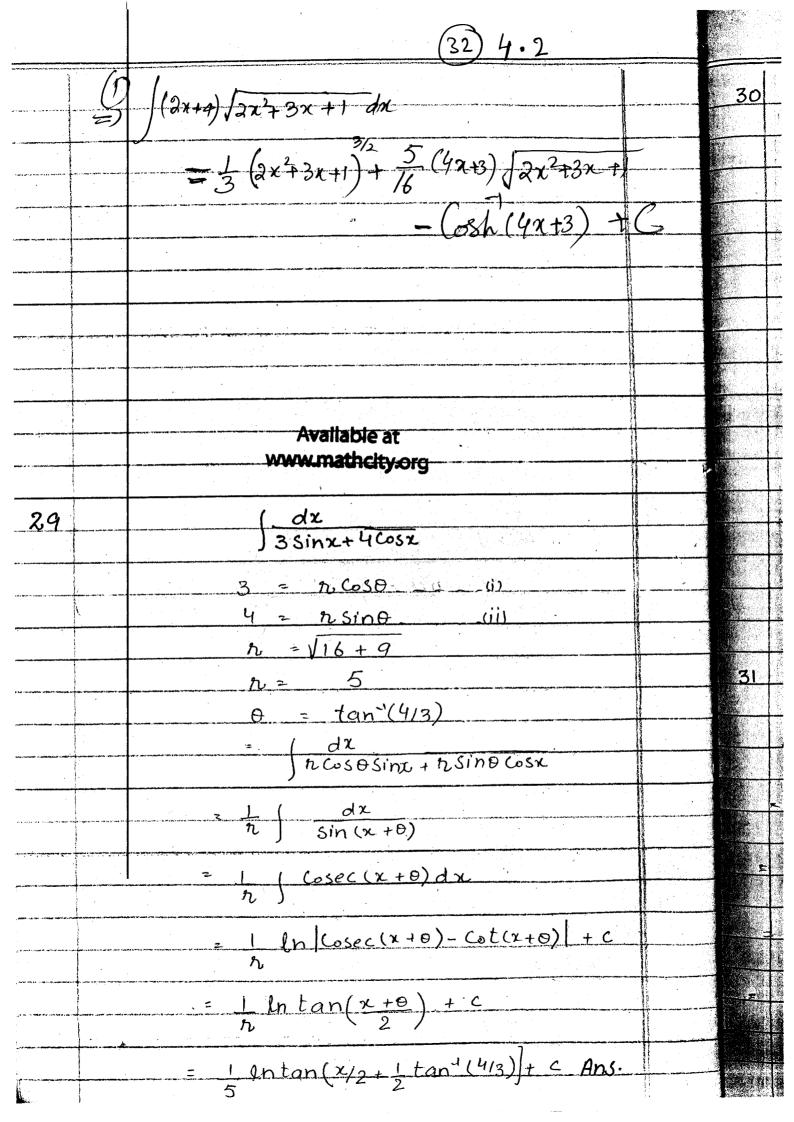
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and a second residence of the second of the second	$\frac{1}{\sqrt{2}} \sin^{-1} \left(\frac{4x + 3/4}{\sqrt{23}/4} \right) + C$		
	19 AND SERVICE AND		
and the second s	$\frac{1}{\sqrt{2}} \frac{\sinh^4(4x+3)}{\sqrt{23}} + c$		
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		24	$\sqrt{a^2-x^2}$ MathCity.org	
			Merging Man and maths	
-			$T = (\sqrt{\alpha^2 - \chi^2} d\chi)$	
			j j	
			x = asin0	
			$dx = a \cos \theta$	
			$= \int \sqrt{a^2 - a^2 \sin^2 \theta} \cdot a \cos \theta d\theta$	
-				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
			$= (\sqrt{a^2(1-Sin^2)}) a \cos \theta$	
	1			
			$= q^2 \left(\cos^2 \theta d\theta \right)$	大きまた。
				Contract Contract
			$rac{1}{2}\left(1+\cos \theta\right) d\theta$	
			$\frac{z}{2} \frac{a^2}{1 + \cos 2\theta} d\theta$	
~~~			$= O^2 \left[ \left( \left( \frac{1}{2} O + \left( \left( \frac{1}{2} O + \frac{1}{2} O \right) \right) \right) \right]$	1. de
			$= a^2 \left[ \frac{1}{2} \int d\theta + \frac{1}{2} \int \cos 2\theta d\theta \right]$	C. Control of the con
***			$= \alpha^2 A + \alpha^2 \sin 2\theta + C$	
	Special Section 201		2 4	100000000000000000000000000000000000000
Tipo es com			$a^2 + a^2 + c + c$	
******	Annual Control of the		- a ² 0 + a ² 2SinoCoSO + C	
*******			$\alpha^2 \alpha + \alpha^2 \sinh \alpha \cos \theta + c$	
	1000	-	= $\frac{a^2 a + a^2 sih e cose + c}{2}$	
the lands represent		-	$- a^2 a + a^2 (\sin a \sqrt{1 - \sin^2 a}) + c$	
s in the second			$= \frac{a^2 o + a^2 \left[ \sin 0 \sqrt{1 - \sin^2 0} \right] + c}{2}$	
			$= \frac{a^{2} \sin^{2}(x)}{2} + \frac{a^{2} \left[ \frac{x}{a} \sqrt{1 - x^{2}/a^{2}} \right] + c}{2}$	
<b></b>			$\frac{1}{2} \left[ \frac{1}{2} \right]$	
			$\frac{2}{2}\frac{a^2\sin^2(x)}{2}+a^2x\sqrt{a^2-x^2}$	
··· Whateres			2 (a) 2 ax	
, may 1, 1, 1, 1, 1	The state of the s		$x\sqrt{(x^2-x^2)} + a^2 \sin(x)$	
		4	$= \frac{\chi\sqrt{\alpha^2-\chi^2} + \alpha^2 \sin^2(\chi)}{2} \text{ Ans.}$	
	7.5 5.4		The second secon	

2.5	$(2x+3)\sqrt{2x+1}$	
A history transfer case, payor spans	$\sqrt{2x+3} = t$	
	$2x + 3$ $- +^2$	
	$2x = t^2 - 1$	07
	2dx - 2tdt	27
7	dx = t dt	
	$= \int (t^2 - 1 + 3)t \cdot t dt$	
	J. 326-1-46	
	$= (t^2 + 2)t^2 dt$	
	La Carle al	
	$= (t^4 + 2t^2)dt$	
	10 4 20 / 46	
	ts 0 t3	
	$\frac{t^{s}}{5} + 2t^{3} + c$	
	$=$ $(2\times1)^{S_{1}}$ $\frac{3}{2}$	
	$= \frac{(2x+1)^{5/2}}{5} + \frac{2(2x+1)^{3/2}}{3} + c$	
26	$(1+x^2)^{-3/2}$ dx	
na The Later will be supported by the contraction of the contraction o		
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	366 0 00	
	$= \int (1 + \tan^2 0)^{3/2} \sec^2 0 d0$	v .
	= ((((((((((((((((((((((((((((((((((((	
	$= \int (Sec^{-3}\theta) Sec^{2}\theta d\theta$	1
2.81	sec'0 d0	
	) 355 Q QQ	
	$\int \frac{1}{\sec o} do$	
	(Coso do	
	J SNA CA	
	- Sino +c	
		25/2 25/2

	lı	-		
أدو يووره تحد			$\frac{1}{2}$ $\frac{x}{c}$ Ans.	
			$\frac{1}{\sqrt{1+x^2}} + \frac{c}{\sqrt{1+x^2}} + \frac{Ans}{\sqrt{1+x^2}}$	
			10	
			1	7
	4400	27	Sing - x	
			$\frac{x^2}{\sqrt{x^2+1}} \qquad \qquad \frac{\sin \alpha = x}{\sqrt{1+\alpha}}$	-χ2
and consideration from the constraint of the con				
A CONTRACTOR OF THE PARTY OF TH			$\int \frac{\chi^2 + 1 - 1}{\sqrt{\chi^2 + 1}} d\chi,$	
The second secon			$\int \sqrt{x^2 + 1}  dx - \int \frac{1}{\sqrt{x^2 + 1}}  dx$	
				The second secon
	Served of Assessed Spirite Serveding Spiriters			
	À	[	$x = asinh\theta$	The second secon
Section of the sectio			$dx = (1) \cosh \theta d\theta$	to Votage
			dx = coshodo	
The second second			=> J\sinh20+1 coshodo	
Algebra and a second				-
the transfer and			= SCosho Cosho do	
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			z Scosh e do	The second
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Complete or many			z (1 + Cosh20 d0 2	Andreas
The same of the sa			- 1 ( . da + 1 ( C . h 2 a da '	Tiple of the second
And the second s	3		$=\frac{1}{2}\int 1d\theta + 1\int cosh2\theta d\theta$	Taging and the state of the sta
City in specimen we come			- 10 + / (simha x Cacha)	
Manager and Joseph			$\frac{2}{2}\frac{1}{2}\frac{0}{2} + \frac{1}{2}\left(\sinh\theta * \cosh\theta\right)$	
and the same of th		; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	- 110 + (inha(-(ha)+)	
1		\$ 1. 5 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	$= \frac{1}{2} \left( \frac{\theta + sinh\theta cosh\theta}{2} \right) + c$	
			$= \frac{1}{2} \left[ \frac{\sinh^2 x + x \cdot \sqrt{1 + x^2}}{2} \right] = \frac{\sinh x}{2} + \frac{\text{M.S.1+n.2}}{2}$	
1			2 2 2	PU

44		30) 4.2		
Now	$\frac{7}{2} = \int \frac{1}{\sqrt{x^2}}$	dx		
	Cinha			and the same and same
	$x = Sinh\theta$ $dx = Cosh\theta$			
The second of th	$\frac{\partial x}{\partial x} = \frac{\cos h\theta}{\cos h\theta}$			
	JSinho+1			
The second secon	( Coche	de		
	= (Cosho) Cosho			
	= (1d0			
	$=$ $\int L \alpha \theta$			
	z 0 + C	The state of the s		
	$\sinh^2 x + \alpha \sqrt{1+}$	$\frac{1}{x^2}$ - $\sinh x$		
$(i) \Rightarrow S$	$\frac{\sinh^2 x + x\sqrt{1+}}{2}$	2 - 311111		•
		$\chi\sqrt{1+\chi^2}$		
= S	inh x [ 1 -1] +	2		
		as 17 so Phis		
	$\frac{1}{2} \frac{1}{2}$	Sinh X Fire		
	2 -	. 1 1~		
(28)	22 +4) \ 222 + 32	TI aL		
		11/2//- + 9/	1~	
	$\frac{1}{2}$ $\frac{(2 \times + 3 \times 2)}{2}$	$+1)^{42}(4x+8)a$		
	2 2 1/2/	112 12 +5) d. Y	and the second s	
2 / 2	(2x2+3x+1)1/2	9275	erendeligen den de judgerend, unwergt Spieg and de la makendele von der vir gjunde under generale ver	
	(1 , 2 \ , 5			
= 1	$\frac{(4x+3)+5}{(2x^2+3x+1)^{-1/2}}$	<u> </u>		
- (1)	$\frac{1x + 3}{2x^2 + 3x + 1} = \frac{dx}{2}$	5 (12X.+	37c +1) dr	X •
$\frac{1}{2}$	$(x + 3)$ $(x + 3)$ $(2x^2 + 3x + 1)$ $(2$	7 3 )	J	
	$\frac{2^{2}+3x+1}{1+2}$	5 (12×2+37+	$+1)^{1/2}dx$	
$\frac{1}{2}$	+32+1 +1	2)		
*	13/2	.5 ((-122+	3x +1/01x	
$\frac{1}{2}$ $\frac{2}{3}$	$(2x^2+3x+1)^{3/2}$	2/1/2/	2 2/	



	Stanz dz Cosz + Secz
	$\frac{1}{1} = \int \frac{\sin x/\cos x}{\cos x} dx$ $\frac{1}{\cos x} = \frac{1}{\cos x}$
	2 Sink x Cosk dx  Cos²x+1 Cosx
	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
	csx = t
	- Sinxdz = dt
	Sinxdx = -dt
	$= \int -dt$ $\int t^2 + 1$
	= - ( dt
	$= - \int \frac{dt}{t + t^2}$
	$z = tan^{-1}(t) + c$
	$z = tan^{-1}(\cos x) + c Ans$
31	$\int \frac{dx}{\sin(x-a)\sin(x-b)}$
	Multiplying and dividing by $Sin(a-b)$
	$\frac{1}{\sin(a-b)} \int \frac{\sin(a-b)}{\sin(x-a)\sin(x-b)} dx$
5	$\frac{1}{\sin(a-b)} \int \frac{\sin(x-x+a-b)}{\sin(x-a)\sin(x-b)} dx$
	$\frac{1}{\sin(a-b)} \left\{ \frac{\sin(x-b-(x-a))}{\sin(a-b)} dx \right\}$ $\frac{1}{\sin(a-b)} \left\{ \frac{\sin(x-a)\sin(x-b)}{\sin(x-b)} \right\}$
5	$\frac{1}{\sin(a-b)}\left\{\begin{array}{l} \left(\sin(x-b)\cos(x-a) - \cos(x-b)\sin(x-a)\right) \\ \sin(x-a)\sin(x-b) \end{array}\right\}$

n a ann an	$\frac{1}{\sin(a-b)}\frac{\sin(x-b)(\cos(x-a)-\cos(x-b)\sin(x-a)}{\sin(x-a)\sin(x-b)}$ $\frac{\sin(x-a)\sin(x-b)}{\sin(x-b)}$	
2	$\frac{1}{\sin(a-b)} \int \frac{\cos(x-a)}{\sin(x-a)} dx - \int \frac{\cos(x-b)}{\sin(x-b)} dx$	34
	$\frac{1}{\sin(a-b)}\left\{\ln \sin(x-a)  = \ln \sin(x-b) \right\} + c$	
	$= \frac{1}{\sin(a-b)} \frac{\ln\left \sin(x-a)\right  + c}{\sin(x-b)} + c}$ $= \frac{1}{\sin(a-b)} \frac{\ln\left \sin(x-a)\right  + c}{\sin(x-b)}$	
3&	tanx In (secx)	
water the table for the second second second		35
	ln(secx) = t  Secx tanx dx = dt  secx	
	$tanx dx = dt$ $= \int t dt$	
	= t ² + c	
The state of the s	$= \frac{1}{2} \left( \ln \sec x \right)^2 + C$	
33	$\int \frac{1}{(3\tan x + 1)\cos^2 x} dx$	
المحارث المحارض المحار	het $tanx = t$ $sec^2xdx = dt$	
A CONTRACTOR COMME	$= \int \frac{\sec^2 x}{3\tan x + 1} dx$	
	$\frac{z}{3t+1}$	
e man ge Anna 100 mm entyrel	= 1	36
ance delicate and the second s	$= \frac{1 \ln  3t+1  + C}{3}$	

	1 + and [ \( \overline{1} \) + and	
	$\sqrt{6}$ $\sqrt{3}$ $\sqrt{3}$	
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- 90	Jun Sec VK Lanvi dx	
	1 +	
-	$\frac{1}{2\sqrt{x}} = \frac{\alpha x}{2}$	
	dx - 0,57 H	
	t Section 26 dl	
	- Olegat to the	6.
	$\boldsymbol{j}$	
	= 1 Secyt + C Ans.	
39	$\left(\int_{\overline{A}} \sin x \cdot \left(\zeta_{1} \cdot x\right)^{\overline{A}}\right) c$	13 To 10 To
	$C_{1}(x) = C$	
	$\nabla^{t} + \nabla^{x+1} + \nabla^{x} + \nabla^$	•
1	$ln\bar{\chi}$ $\bar{\chi}$ $+1$	
	$= X^{\sin x} + (\sin x)^{x+1} + C = \cos x$	
	$\ln \pi$ $\pi + 1$	
	( Cosx dr.	and the second
40	3 Sinx + 4 VSinx	
	$\sqrt{\sin x} = t$	
	$\frac{1}{1} \cos x  dx = ct$	
	ZVSinx	
<u> </u>	Cosxdx = 2. Vsinx dt	
	Cosxdx = 2t dt	
	38	Let $\sqrt{x} = t$ $  dx = dt   dx = dt$ $  dx = 2\sqrt{x} dt   dx = 2t dt $

 $\begin{cases} 2t & dt \\ 3t^2 + 4t \end{cases}$  $\frac{2}{3}\left(\frac{3}{3} + 4\right)$ = 2 ln | 3 \sinx + 4 | + c Answer Exercise No. 4.3 Evaluate fx.Secxdx.
by parts  $= \chi \int Sec^2x \, dx - \int \frac{d}{dx}(x) \int Sec^2x \, dx$ = x tanx - fi (tanx)dx xtanx - J sinx dx  $x + \int \frac{-\sin x}{\cos x} dx$ xtanx + ln/cosx/+c Ans.

 $2 \int x \cos^2 x \, dx$ 

=  $x \int \cos e^{2x} - \int \frac{d(x)}{dx} \int \cos e^{2x} dx$