

# (Approved by AICTE New Delhi & Gere, of Maharishera, Affiliated to University of Manahal) (Kelligious Jain Minority)

	The second of the second
4	Find Fourier Series of fla)= x2 in (-11, 11)
<u>8</u> 01 n	As given interval is (-11, TI).
	(We will check fox) is even modd)
	$f(-x) = (-x)^2 = x^2 = f(x)$
	=> f(2) is even
	> bn=0
	Also, $l = \Pi$ $f(x) = \frac{a_0}{2} + \sum_{n=1}^{\infty} a_n \cos(n\pi x)$
	$\frac{1}{2}$
	$\frac{1}{2} \frac{a_0}{a_n} \int_{n_{2l}}^{\infty} a_n \cos nx \qquad \qquad D$
	$\frac{2}{n^{2}}$
	an - 2 (1 fra) da
4	$a_0 - 2 \int_{a}^{b} f(x) dx$
9	$= 2 \int_{\Pi} x^2 dx$
10	П
4	$\frac{2}{\pi} \left[ \frac{3}{3} \right]_{0}^{\pi}$
	T [3]0
	$=\frac{2}{n}\frac{n^3}{3}$
	n 3
	- 2 п 2
	3
	$a_n = 2 (l f(x) cos (n\pi x) dx$
	(1)
	= 2 (T. x2 cos mx dx
. 1	الح ال
	= 2 (x2) (sinnx)-(2x) (-cosmx)+ 2(-sinmx)
	$\frac{-2}{\pi} \left( \frac{(x^2)}{n} \left( \frac{\sin nx}{n} \right) - \frac{(2x)}{n^2} \left( -\frac{\cos nx}{n^2} \right) + 2 \left( -\frac{\sin nx}{n^3} \right) \right)$
	-2 [01 Ort Cocnst. 0 -10 of
	$\frac{-2}{11}$ 0+ 217 COSN11 + 0 - 0 + 0 - 0
	Deaf Manay Cinallin
<b>Sundaram</b>	Prof. Nancy Sinollin FOR EDUCATIONAL USE
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	$Q_{n-1} = Q_{n-1} + Q_{n-1}$
	$\frac{\alpha_n - 2}{M} \frac{2H}{n^2}$
	- 4. (1) <sup>n</sup>
	- 4(-1) <sup>n</sup>
ì	15000
	1-ram (1)
	$\frac{1}{3\times2}$ $\frac{4(1)}{3\times2}$ $\frac{4(1)}{3\times2}$ $\frac{4(1)}{3\times2}$
	$f(x) = \frac{2\pi^2}{3x^2} + \sum_{n=1}^{\infty} \frac{4(4)^n}{n^2} \cos nx$ $= \frac{\pi^2}{3} + 4 \sum_{n=1}^{\infty} \frac{(-1)^n}{n^2} \cos nx$
	$=\frac{11-4}{3}+\frac{4}{2}$ (-127 rosnx
	n=) n
5	
	Find Fourier Series of flat = x in (+11, 11)
sun	As interval (-H/H) is given  we can check flat is either odd or even
	we can check flat is either odd or even
	$\frac{1}{2}$
	=> fex 1 is odd => ao = 0, an =0 Here, l=TT
<i>p</i> 11	$\Rightarrow fext is odd \Rightarrow a_0 = 0, a_n = 0  Here, l = \pi$ $\therefore fext = \int bn \sin(n\pi x) = \int bn \sin n\pi = 0$
	no hal
q	bn = 2 flat sin (nmx) da
	2
	= 2 (TX sinnxdx
	T J
	= 2 [x (-cosnx) - (i) (-sinnx)]
11	$\Pi$ $\Gamma$
- 1	-2 [ n ( - cosnII ) + 0 - 0 +0]
	$\Pi$ $(n)$
The state of the s	= -2 x M CosnT = -2(=1)n
- 9	n n
11	From (I)
	7(x)=5 (-2)(-n) sinnx
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10	
and a	



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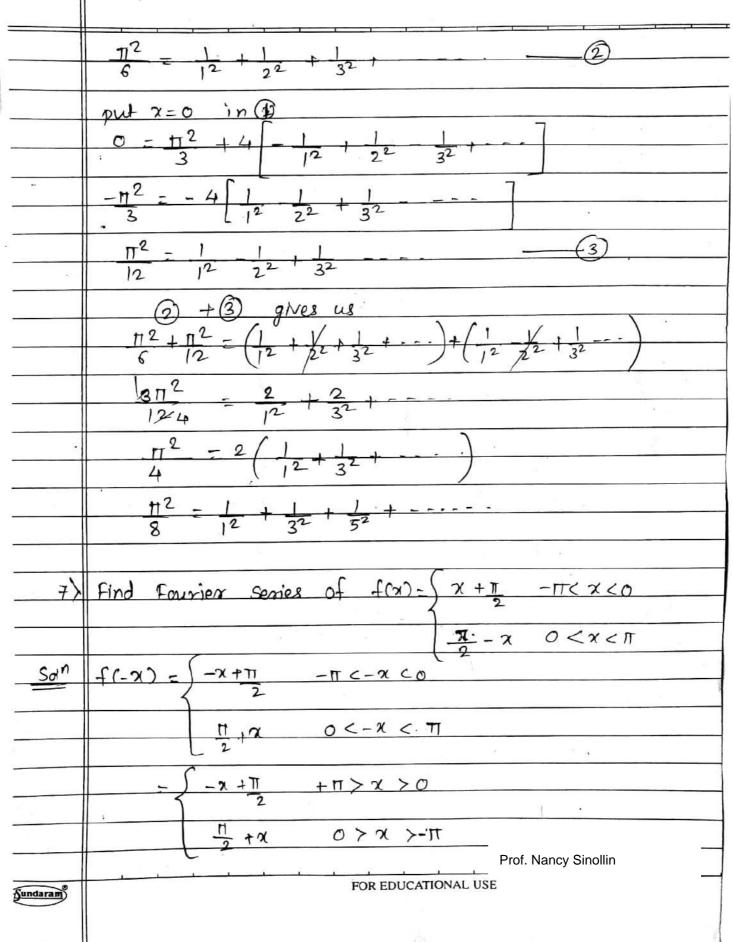
	at alternative of familiary
6>	find Fourier Series of fazz x+x2 in (-11, 11)
	Hence find 1> 12 - 12 + 12 +
	6 1 22
	$2 \times \prod^{2} = \frac{1}{12} + \frac{1}{2^{2}} + \frac{1}{$
	6 1 3
Sutn	$f(x) = x + x^2 = f(x) + f_2(x)$
	(as fen) is neither even nor odd function)
	Hence, $f_1(x) = x$ & $f_2(x) = x^2$
	From 4> & 5> we have
	$f_2(x) = x^2 - \pi^2 + 4 \sum_{n=1}^{\infty} \frac{(-1)^n \cos nx}{n^2}$
100	3
- E	$P_1(x) = x = \sum_{n=1}^{\infty} (-2)(-1)^n \sin nx$
	hal .
	:. f(x) = x2+x = f2(x) + f1(x)
1 1944	$-\frac{\pi^{2}}{3} + 4 \sum_{n=1}^{\infty} \frac{(-1)^{n} \cos nx}{n^{2}} + \sum_{n=1}^{\infty} \frac{(-2)(-1)^{n} \sin nx}{n}$
	$\frac{3}{h=1}$ $\frac{2}{h=1}$ $\frac{2}{h=1}$ $\frac{2}{h=1}$
1	To prove remaining part we'll just use former
¥4	series of $f_2(x) = x^2$
	Series of $f_2(x) = x^2$ $f_2(x) = x^2 + \frac{\pi^2}{3} + 4 \sum_{n=1}^{\infty} \frac{(-i)^n}{n^2} \cos nx$
	$\frac{3}{n-1}$ $\frac{n^2}{n^2}$
- H	$-H^2$ , $4 - (05x + (052x - (053x +) - 1)$
	3" [ 12 22 3
	put x-17 in (1)
	M2=112+4[-(-1)+1-(-1)
	3 [ 12 2 3 ]
ALA DESA	$   H^2 - H^2 - 4   _{12} + \frac{1}{2^2} + \frac{1}{2^2} + \cdots - \frac{1}{2^2} + \frac{1}{2^2} + \cdots - \frac{1}{2^2}$
	3 [12 2 3
	$\frac{2\pi^2}{100} = \frac{1}{100} + \frac$
87 July 1	3×4 1 <sup>2</sup> 2 <sup>2</sup> 3 <sup>2</sup> Prof. Nancy Sinollin
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### T & SHAH MARRING OF BESHADEOGY

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## proved by AICTE New Bolhi & Govt. of Maharachira, Affiliated to University of Mumbal) (Religious Jain Minority)

	Charges an ameny
	T +xx -11 < x < 0
	= \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
	$\frac{11}{2} - \chi \qquad O < \chi < \Pi$
	.2
	$=f(\alpha)$
	f(n) is even function.
	=> bn=0 & 1=1
Ý	Hence, o
-	flux = ao os nos nos nos nos nos nos nos nos nos
	59
	$= \frac{a_0}{2} + \sum_{n=1}^{\infty} a_n \cos n\alpha - 0$
	V-1
	ao - 2 pl fex) dx
J.	$=\frac{2}{\pi}\int_{-\infty}^{\pi}\left(\frac{1}{2}-x\right)dx.$
	$=\frac{2}{11}\left[\frac{11}{2}x-\frac{\chi^2}{2}\right]^{11}.$
	ا ا
	$\frac{-2}{\Pi} \left[ \begin{array}{cccc} 11^2 & 12 & -0 \\ 2 & 2 & \end{array} \right]$
137	_ 0
116	an = 2 sl fra ros (nm) dx
	$= 2 \left( \frac{\pi}{2} \right) \cos nx  dx.$
* **	1 0
	$\frac{-2\left[\left(\frac{17-x}{2}\right)\left(\frac{\sin nx}{n}\right)-\left(-1\right)\left(-\cos nx\right)\right]}{n}$
The Land	$-2[0)-cosnii-0+1]-2[-(-1)^n,1]$
4031	$\frac{1}{n^2} \frac{n^2}{n^2} \frac{1}{n^2} \frac{1}{n^2}$
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(Jundaram)	FOR EDUCATIONAL USE

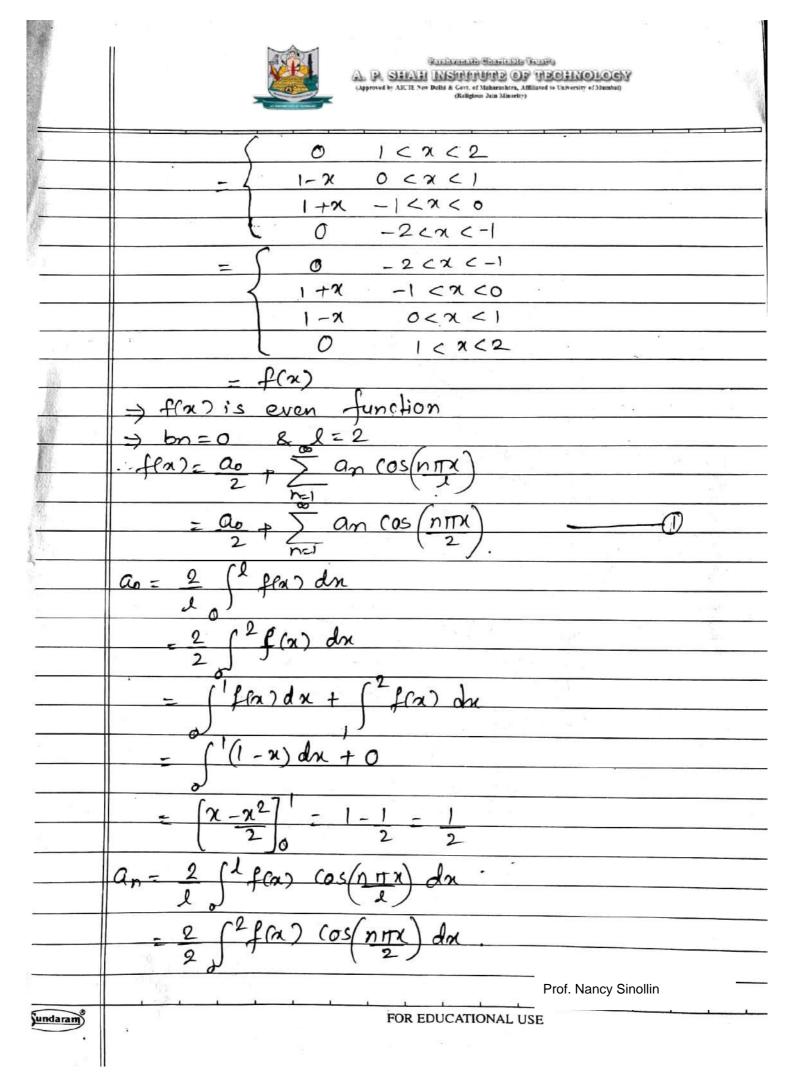


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	$\frac{\alpha_n - 2 \left[1 - \left(-1\right)^n\right]}{\pi \left[n^2\right]}$
	$f(x) - 0 + \sum_{n=1}^{\infty} \frac{1}{n^2} \frac{1 - (-1)^n}{n^2} \cos nx$ .
	$-\frac{2}{n} = \frac{1}{n^2} \left[ \frac{1}{n^2} - \frac{1}{n^2} \right]$ $-\frac{2}{n} = \frac{1}{n^2} \left[ \frac{1}{n^2} - \frac{1}{n^2} \right]$ $-\frac{2}{n} = \frac{1}{n^2} \left[ \frac{1}{n^2} - \frac{1}{n^2} \right]$
1	$\frac{11}{n^{2}} \left[ \begin{array}{c} n^{2} \\ \end{array} \right]$ $= \frac{2}{11} \left[ \begin{array}{c} 2 \cos x + 0 + 2 \cos 3x + 0 - \cdots \\ \end{array} \right]$
	$f(n) = \frac{4}{\pi} \int \frac{\cos x + \cos 3x}{12} + \cdots = \frac{2}{\pi}$
	put x = 0 in @, we get
ê <sub>y</sub>	$f(0) = \frac{1}{11} \left[ \frac{1}{12} + \frac{1}{32} + \frac{1}{12} + \frac{1}{12} + \frac{1}{32} + \frac{1}{12} + \frac{1}{32} + \frac{1}{12} + \frac$
	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
	$=\frac{1}{2}\left[\frac{\pi}{2}+\frac{\pi}{2}\right]-\frac{\pi}{2}$
	$\frac{1}{2} = \frac{4}{11} \left[ \frac{1}{12} + \frac{1}{32} + \frac{1}{32} \right] = \text{from } (3)$
	$\frac{1}{8} - \frac{1}{12} + \frac{1}{3^2} + \cdots$
- N	To prove se cond series we will use Parseval's identify.
	$\frac{2}{2} \left( \frac{1}{1} \left( \frac{1}{1} - \frac{1}{2} \right)^2 dx - \frac{2}{2} + \frac{2}{2} \left( \frac{1}{1} - \frac{1}{2} \right)^{\frac{1}{2}} \right)$
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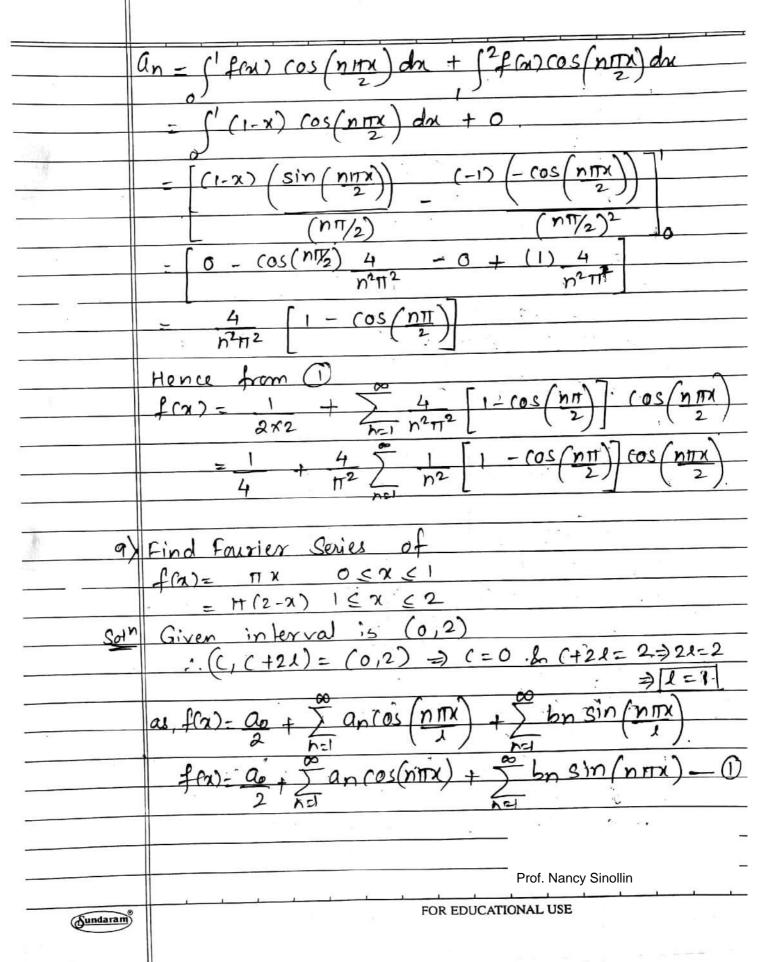
**Sundaram** 

<i>y</i>	(Religious Jain Minerity)
	$\Rightarrow 2 \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right]^{3} \frac{\Pi}{\sqrt{2}} $ $\Rightarrow \frac{2}{\Pi} \left[ \frac{\Pi - \chi}{2} \right$
	$\Rightarrow 2 \left[ \frac{(-\pi)^3}{\pi} \right] \frac{(\pi)^3}{-3} - 4 \sum_{n=1}^{\infty} \frac{(1-(-1)^n)^2}{n^4}$
	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
	$= \frac{1}{24} + \frac{1}{34} + \frac{1}{34$
12 12 13 14 15	$\frac{1}{96} = \frac{1}{14} + \frac{1}{34} + \cdots = \frac{1}{34}$
8>	Find fourier Series of f(u) = 0 -2 < x <-1
3	1+x -1 < x < 0 1-x 0 < x < 1
	0 1 < x < 2
ुं जुण	As interval is $(-2,2)$ we'll check flat is even or odd. f(-x) = (0 -2 < -x < -1)
	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
9 - g/ <sub>2</sub>	$ \begin{array}{c cccc}  & 0 & 2 > 2 > 1 \\  & & 1 > 2 > 0 \end{array} $ $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
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### Parliamenth Charlettle Territo

(Approved by AICTE New Delth & Cort. of Maharachtra, Affiliated to University of Mumbal)
(Religious Jain Minertry)

	ao = 1 (C+2lf(x) dx
-	
_	$= \int_{-\infty}^{\infty} f(x) dx$
	- ('f(n)'dx + (2fen) dx
-	$= \int_{-\infty}^{\infty} dx + \int_{-\infty}^{\infty} dx + \int_{-\infty}^{\infty} dx$
-	(a) (b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c
	$= \prod \left[ \frac{\chi^2}{2} \right]^{\frac{1}{2}} + \prod \left[ \frac{2\chi - \chi^2}{2} \right]^{\frac{2}{2}}$
	$= H \left[ \frac{1}{2} \right] + H \left[ 4 - \frac{4^2}{3} - 2 + 1 \right]$
	$= H \left[ \frac{1}{2} + 2 - 2 + 1 \right]$
	- H
- 11	an= 1 (C+2l fm) cos (nom) da
-	` ~ /
-	= 1 (2 fra) cos (prox) dx.
	= (1 Hx (Os(nTx)) dx + (2 H (2-x) (Os(nTx)) dx
-	= $\Pi$ ['x cos(n $\pi x$ ) $dx + \int^2 (2-x) \cos(n\pi x) dx$ ].
-	$= \pi \left[ \left( x \left( \sin n \pi x \right) + (1) \left( -\cos n \pi x \right) \right) \right]$
	$n\pi$ $n^2\pi^2$
e	$+((2-x)(sinninx)-(-1)(-cosninx))^2$
-	η (C   (CC) (T   C   CC) (T   CC) (T
-	$\frac{-110+\cos n\pi -0+-1}{n^2\pi^2} + \frac{0-\cos n\pi}{n^2\pi^2} - 0 + \cos n\pi}{n^2\pi^2}$
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# (Approved by AICTE Now Dolls & Cov. of Maharasters, Affiliated to University of Municipal (Religions Jain Manufry)

	(Approved by AECTE New Delhi & Covt. of Maharashtra, Affiliated to University of Manabal) (Religious Jain Minority)
-	$2n = \Pi \left[ \frac{(-1)^n}{n^2 \Pi^2} - \frac{1}{n^2 \Pi^2} + \frac{(-1)^n}{n^2 \Pi^2} \right]$
	$= \pi \left[ \frac{2(-1)^n}{n^2 \pi^2} - \frac{2}{n^2 \pi^2} \right]$
	$=\frac{2\pi}{n^2\pi^2}\left[(-1)^n-1\right]$
	$\frac{2}{n^2 H} \left[ (-1)^n - 1 \right]$
b	C+2l
	$-1 \left( \frac{2}{f(n)} \sin(n\pi x) dx \right)$
	- ( Tru sin(norx) dx + ( Tr(2-x) sin(norx) dn
	$=\pi \left( \frac{1}{\alpha} \sin(n\pi x) dx + \frac{1}{\alpha} (2-\alpha) \sin(n\pi x) d\alpha \right)$
	$= \Pi \left[ \left( \frac{1}{x} \left( -\cos(n\pi x) \right) - \left( 1 \right) \left( -\sin(n\pi x) \right) \right] \right]$
	$\pm ((2-2)(-\cos(n\pi x)) - (+1)(-\sin(n\pi x)))^{2}$
	$= \pi \left[ \frac{n\pi}{-\cos n\pi} - 0 - 0 + 0 + 0 - 0 - \frac{n^2\pi^2}{-\cos n\pi} \right]$
	- FT - COS NTT + COS NTT
1	- := 'π(o) · · · · · · · · · · · · · · · · · · ·
	infrom (1)
	$\frac{f(n)-1}{2}+\sum_{n=1}^{\infty}\frac{2[(+1)^{n}-1]}{n^{2}\pi}\cos(n\pi x)+0$
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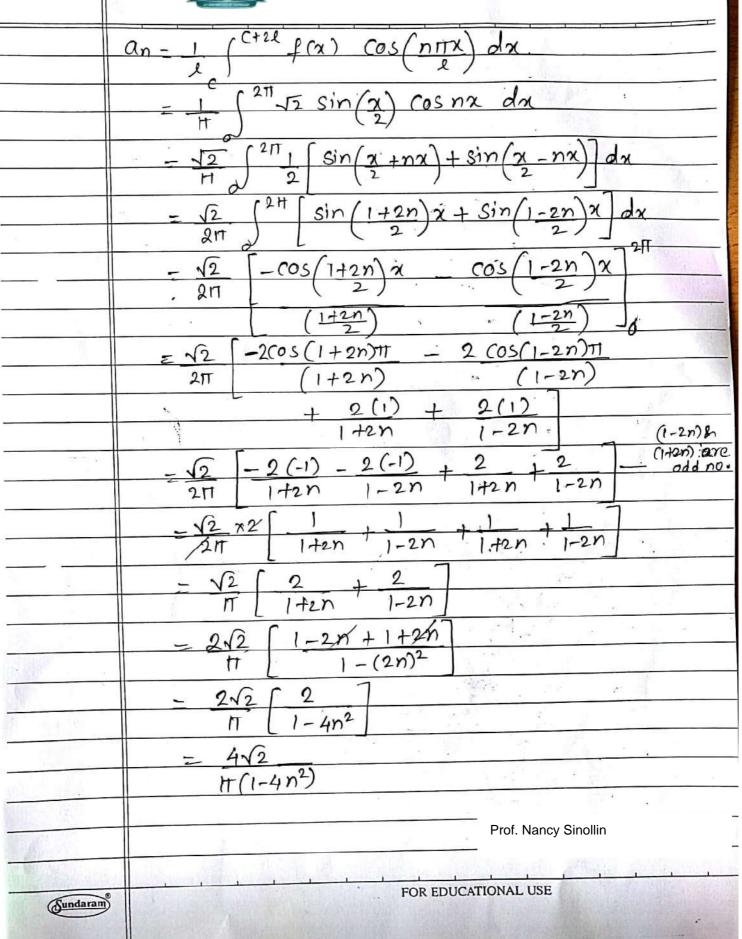


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	:
10)	Find Fourier Series for f.M)= \(\int_{-105x}\) in (0, 211)
	lalgo prove that \ - 1
	$\frac{2}{n=1}$ $4n^2-1$ 2.
Solh	(C,C+21) - (0,2TT)
	$C=0$ & $C+2l=2\pi$ $\rightarrow 2l=2\pi \rightarrow 0=\pi$
	$f(x) = a_0 + \sum_{n=0}^{\infty} a_n \cos(n\pi x) + \sum_{n=0}^{\infty} b_n \sin(n\pi x)$
:	2 / hg / h
	- au = an cosnx + bn sinnx - 1
	$\frac{2}{n-1} + \frac{2}{n-1} = \frac{2}{n-1} \frac{2}$
	$f(x) = \sqrt{1-\cos x}$
	$-\sqrt{2\sin^2(x)}$
	V (2)
	$= \sqrt{2} \sin\left(\frac{\alpha}{2}\right)$
40	a - 1 (C+21 f(a) dx
	2 ()
	$\int_{1}^{2\pi} \sqrt{2} \sin(\pi) dx$
	- 12 (-cos (2/2) 2n
	$[\pi]$ $(\chi_2)$ $]_0$
	$=\sqrt{2}\left(-60\%\Pi+1\right)$
	TT /2 /2
	$=2\sqrt{2}\left[-4)+1\right]=2\sqrt{2}\left(2\right)$
	T T
0	$=4\sqrt{2}$
	П
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ram	FOR EDUCATIONAL USE



## A PA STIAL INSTRUMENTO OF TRESTING LOCAY (Approved by AICTE New Dellink & Gere, of Maharachera, Affiliated to University of Shumbal)





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1	
	bn - 1 (C+21 fra) sin(nox)
	= 1 (21 \sin(x) sinnx dx.
<u> </u>	$:= \sqrt{2} \left(\frac{2\pi}{2} \int \cos\left(\frac{x}{2} - nx\right) - \cos\left(\frac{x}{2} + nx\right)\right) dx$
	$\Pi_{\lambda}$ $\mathbb{Z}$ $\mathbb{Z}$ $\mathbb{Z}$ $\mathbb{Z}$
- 8	$= \sqrt{2} \int_{2\pi}^{2\pi} \left( \cos\left(\frac{1-2n}{2}\right) x - \cos\left(\frac{1+2n}{2}\right) x \right) dx$
	$-\sqrt{2} \left[ \sin\left(\frac{1-2n}{2}\right) \chi - \sin\left(\frac{1+2n}{2}\right) \chi \right]^{2n}$
	$2H \qquad \underbrace{\left(1-2n\right)}_{2} \qquad \underbrace{\left(1+2n\right)}_{0}$
-	$= \sqrt{2} \left[ 2 \sin(1-2n)\pi - 2 \sin(1+2n)\pi - 0 + 0 \right]$
	$2\Pi \qquad (1-2n) \qquad (1+2n)$
<del></del>	- 2/2 0 -0
	2m L
	= 0
1	$f(x) - 4\sqrt{2} + \sqrt{4\sqrt{2}} \cos xx + 0$
	$f(x) - 4\sqrt{2} + \sum_{n=1}^{4} \pi (1 - 4n^2)$ (05 nx. +0
***************************************	$\sqrt{2}\sin(x) = 2\sqrt{2} + 4\sqrt{2}$ Cosm
	$\sqrt{2} \sin(x) = 2\sqrt{2} + 4\sqrt{2} = \frac{1}{11} \cos(x)$
	no no
	$\int \frac{1}{\sqrt{2}(0)} = 2\sqrt{2} - 4\sqrt{2} \int \frac{1}{\sqrt{2}(0)} (0) d0$
	$\pi = \frac{1}{\pi} = $
	0 = 252 - 452 = 1
	$\pi$ $\pi$ $2$ $4n^2-1$
P	4/25 = 2/2
	A n=1 4n2-1 A
	3 5 1 = 1
	$n = 1 + 4n^2 - 1 = 2$
	Prof. Nancy Sinollin
Sundaram	FOR EDUCATIONAL USE
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