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Subject: "Solch Day

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النوات limite (12/4) = 00 = qi (13/1/2 20/4) = 00  $\frac{1}{100} 2X + 3 = 3$  $\frac{1}{\sqrt{1}} = 0$  $\frac{1}{1} \frac{1}{1} \frac{1}$ 1/m 8/n dx = 0 tanx = Sinx CP2X lim tan xx = x x = GSEEX COSX = Sec X Hanx = Coxx

Sinz 
$$X = 2 \sin x \cos x$$

CDS2  $X = 2 \cos^2 x - 1$ 

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$$\lim_{x \to \infty} \left( \frac{\sin 3x}{x} \right)^2 = 9$$

$$\lim_{x \to \infty} \left( \frac{\sin 3x}{x} \right)^2 = 5/3$$

$$\lim_{x \to \infty} \left( \frac{\sin 3x}{x^2} \right)^2 = 2 \lim_{x \to \infty} \left( \frac{\sin 2x}{x^2} \right)^2 = 2$$

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$$= 2 \lim_{X \to \infty} \frac{\sin \frac{1}{2}x}{x} \lim_{X \to \infty} \frac{\sin \frac{1}{2}x}{x}$$

$$2 \cdot \left(\frac{1}{2}\right) \cdot 0 = Zefo$$

$$\lim_{X \to \infty} \frac{1 - \cos 5x}{x^2}$$

$$\lim_{X \to \infty} \frac{2 \sin^2 \frac{x}{2}}{x^2} = 2 \lim_{X \to \infty} \left(\frac{\sin \frac{x}{2}}{x}\right)^2$$

$$= 2 \left(\frac{1}{2}\right)^2 = \frac{1}{2}$$

$$\lim_{X \to \infty} \frac{\sin \left(\frac{\sin (5x)}{x}\right)}{x} \cdot \frac{\sin (5x)}{x}$$

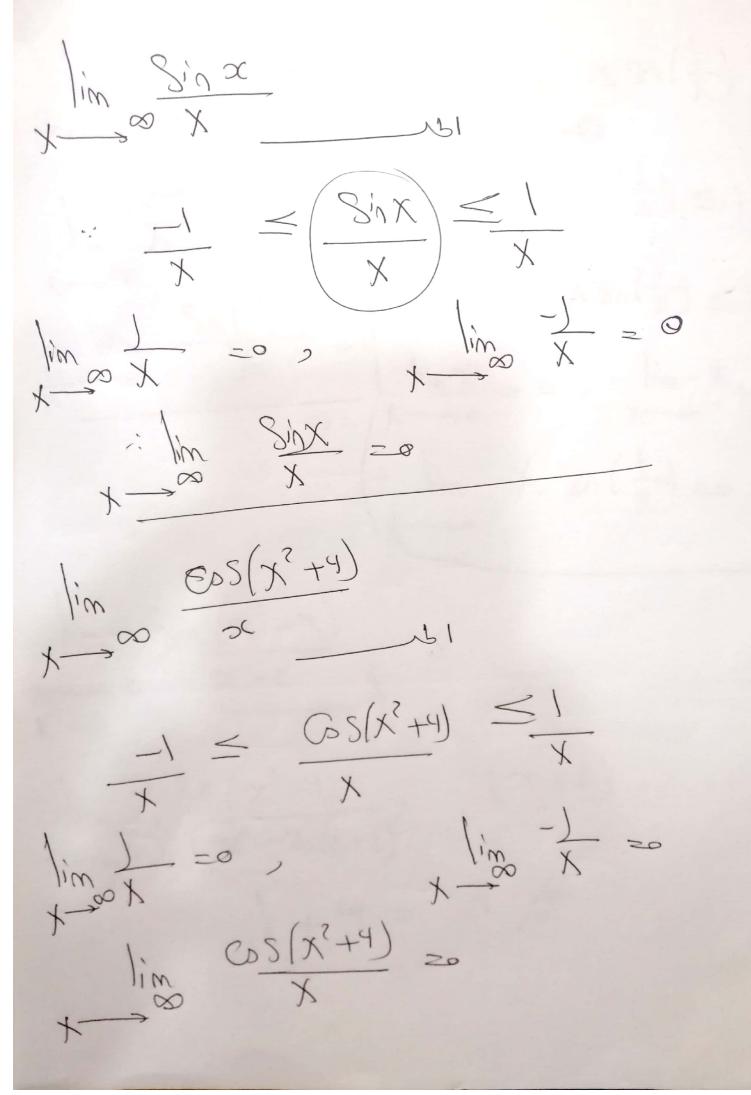
$$\lim_{X \to \infty} \frac{\sin (5x)}{\sin (5x)} \cdot \frac{\sin (5x)}{x}$$

$$\lim_{X \to \infty} \frac{\sin (5x)}{\sin (5x)} \cdot \frac{\sin (5x)}{x}$$

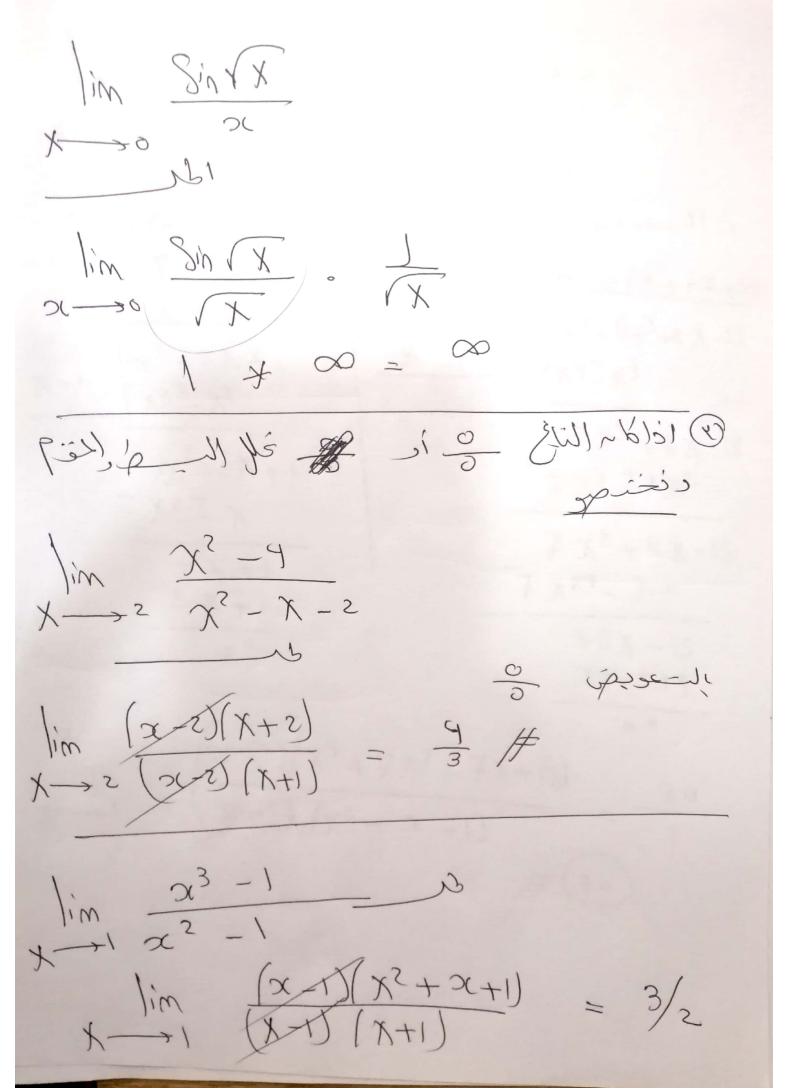
$$\lim_{X \to \infty} \frac{\sin (5x)}{\sin (5x)} \cdot \frac{\sin (5x)}{x}$$

$$\lim_{X \to \infty} \frac{\sin (5x)}{\sin (5x)} \cdot \frac{\sin (5x)}{x}$$

9/x) < f(x) f(N) = L -1 < Cosx < 1



lim XSin(X) Sin(X) lim X Sin ( 1/x)  $-1 \leq 3in(\frac{1}{x}) \leq 1$  $-x \leq X Sin(X) \leq X$ 1 1/m x = 0, 1/m - x = 0 : lim X 8in (X) 20 lim Sin (22 -4) 1->2 (x+z)4 # 44 >



اذاكام النافي من نفسم السيط والمقاعد البودك  $\frac{1}{x} = \frac{x^3 + 4x + 7}{2x^3 + 5x^2 - 9}$ 1 Just 1  $\sqrt{\frac{1+\frac{4}{x^2}+\frac{7}{x^3}}{2+\frac{5}{x}-\frac{9}{x^3}}}$  $= \frac{1+0+0}{2+0-0} > \frac{1/2}{2}$  $\frac{1}{100} \frac{2x+8}{x^3+9x-1}$ المعدم م  $\frac{1}{1+\frac{\lambda_{5}}{0}-\frac{\lambda_{3}}{1}}=\frac{1+0-0}{0+0}=0$ وہے اللے مردعے دعے اللی و مو 1im x x - 1 1 X2  $=\frac{1+0}{0-0}=\frac{1}{0}=90$  $\frac{1}{x} = \frac{1}{x} = \frac{1}{x^2}$ 

$$\frac{\lim_{x \to \infty} 3 \frac{x^3 + 7}{8x^3 + 9}}{x^2 + 9} = 3/8$$

$$\lim_{x \to \infty} \frac{2x + 5}{x - 3} = 2$$

$$\lim_{x \to \infty} \frac{x + 3}{x^2 + 9} = 0 \text{ for } \frac{1}{1} \text{ for } \frac{x^2 + 4}{x^2 + 9} = 0$$

$$\lim_{x \to \infty} \frac{x + 3}{x^2 + 9} = 0 \text{ for } \frac{1}{1} \text{ for } \frac{x^2 + 4}{x^2 + 9} = 0$$

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$$\lim_{x \to$$

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فاعن اوبل [ م ت م يا lin [1+ f] } 1, w 3 = 00 lim f = 0 Im 2.8 = C C= 2.7 00 lim [1+ f]d= 1:m [1+2x] X lim 5X =0 > Kim X lim 2 x. 1 = 2 : /im (1+2X) X = e2 1->0

 $\frac{1}{1}$ 1im Sinx = 0 3 1im 3 = 00  $\frac{1}{x} = 3$  $\frac{1}{100} \left( 1 + \frac{1}{100} \right) = \frac{3}{100}$ lim [1+ Sinx] 2 Cotx  $\lim_{x \to 0} \frac{1}{\sin 2 \cos x} = 2 \lim_{x \to 0} \frac{\cos x}{\sin x} = \frac{2}{\cos x}$ lim Sinx. 2005x = 2  $\lim_{S} (x + 1) = 2$ 

$$\frac{\xi x}{x} = \frac{1}{2} \frac{x}{x} + \frac{3}{4} \frac{3x}{x}$$

$$\frac{1}{2} \frac{x}{x} = \frac{1}{2} \frac{x}{x} + \frac{1}{2} \frac{3x}{x} = \frac{1}{2} \frac{x}{x} + \frac{1}{2} \frac{$$

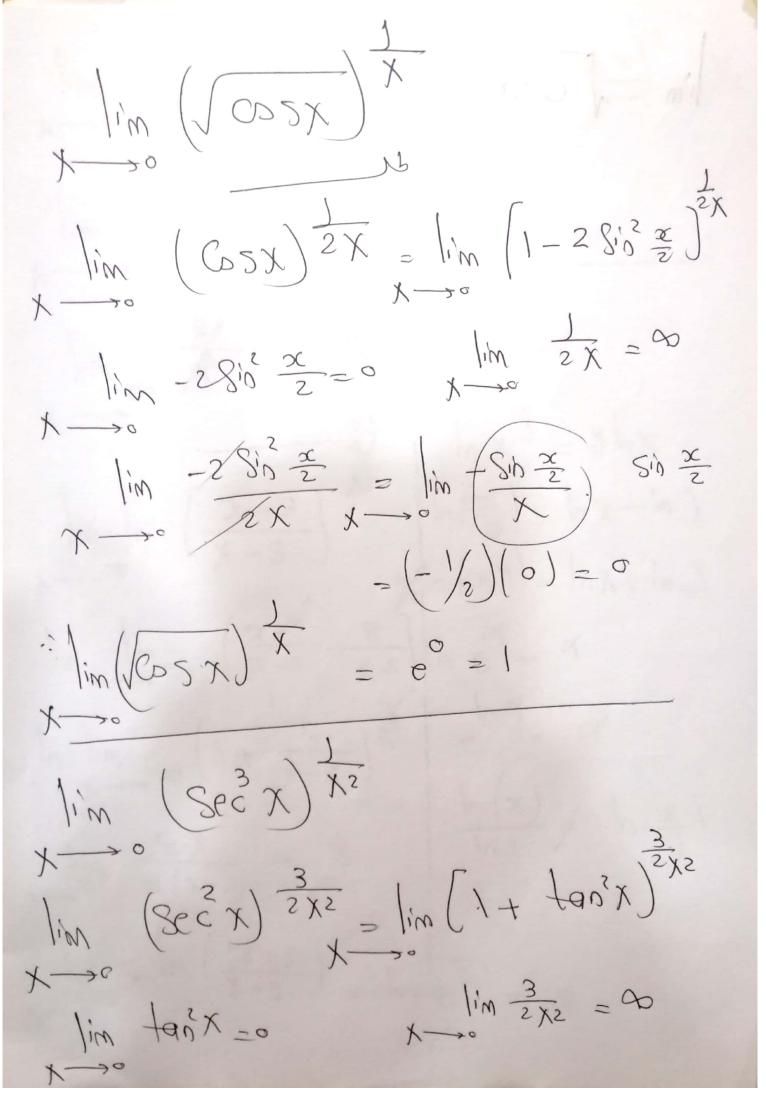
$$\sum_{k=0}^{k} \frac{2x}{x^2 - 3} = 0$$

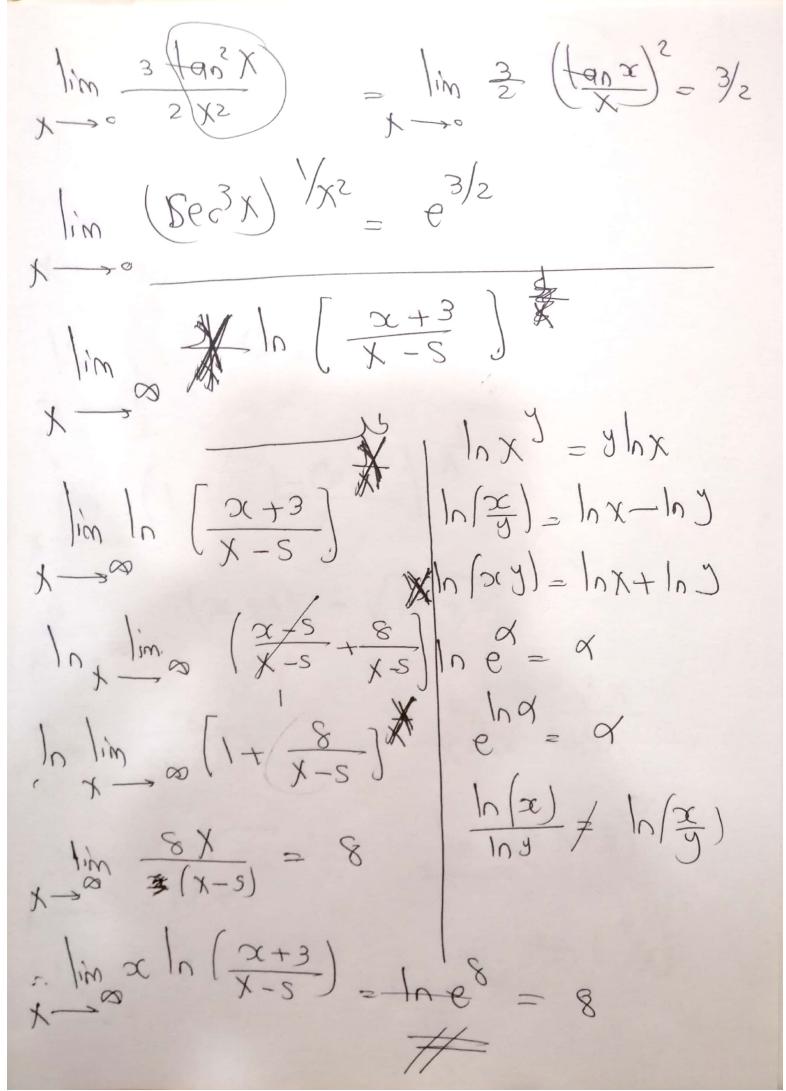
$$\sum_{k=0}^{k} \frac{x^2 - 1}{x^2 - 3} = 0$$

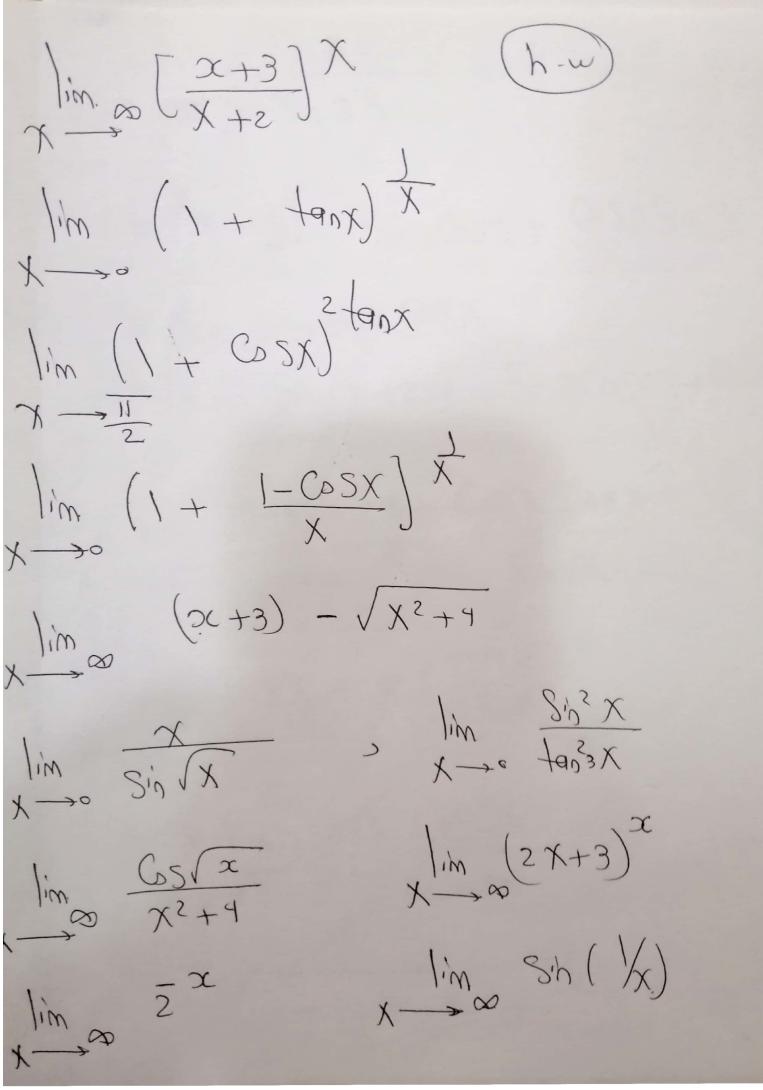
$$\sum_{k=0}^{k} \frac{x^2 - 1}{x^2 - 3} = 0$$

$$\sum_{k=0}^{k} \frac{x^2 - 1}{x^2 - 3} = 0$$

$$\sum_{k=0}^{k} \frac{x^2 - 2}{x^2 - 3} = 0$$







Sin3X X-311 Sin 2X Sin (x+y)= Sinx Cosy+ Cosx Siny Sinzx = 2 Sinx OSX Sin3X = Sin(x+2X) = SinxCos2X+GSXSixX · I'M SINX COSZX + GSX SINZX X-III SIDEX SIDEX Lim Cosx + Sinx Cosex

X-511 -1 -1 + lin Sinx Cosex oc-JI 2 Six Cosx  $-1 + \frac{1}{2} = -3/2$