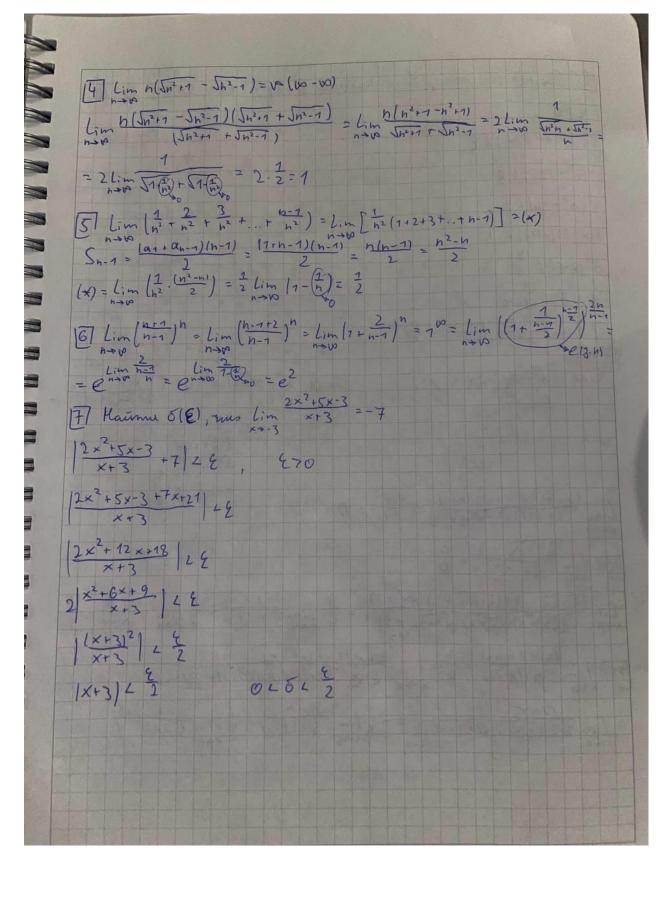
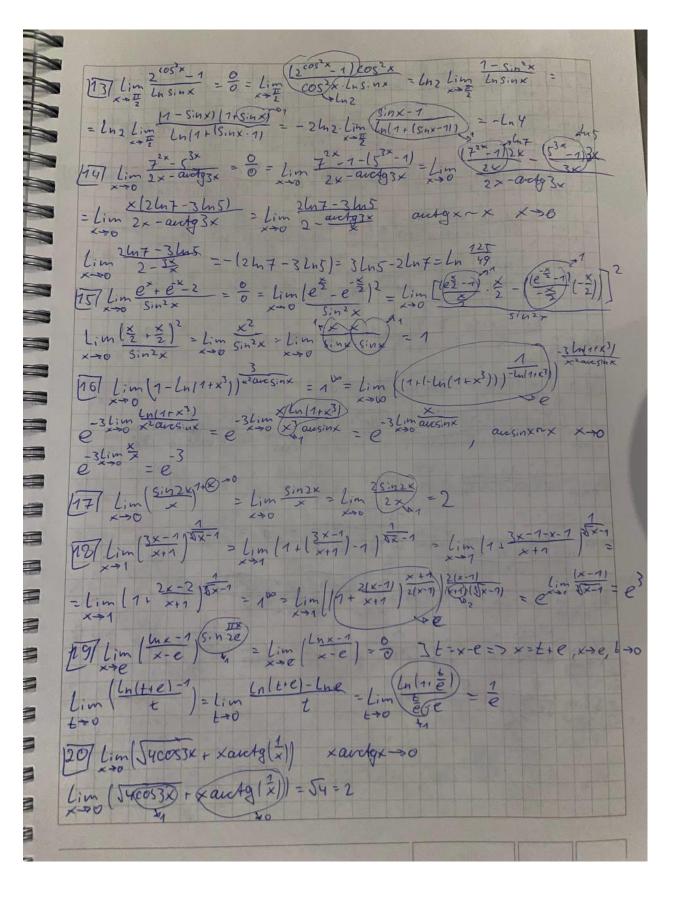


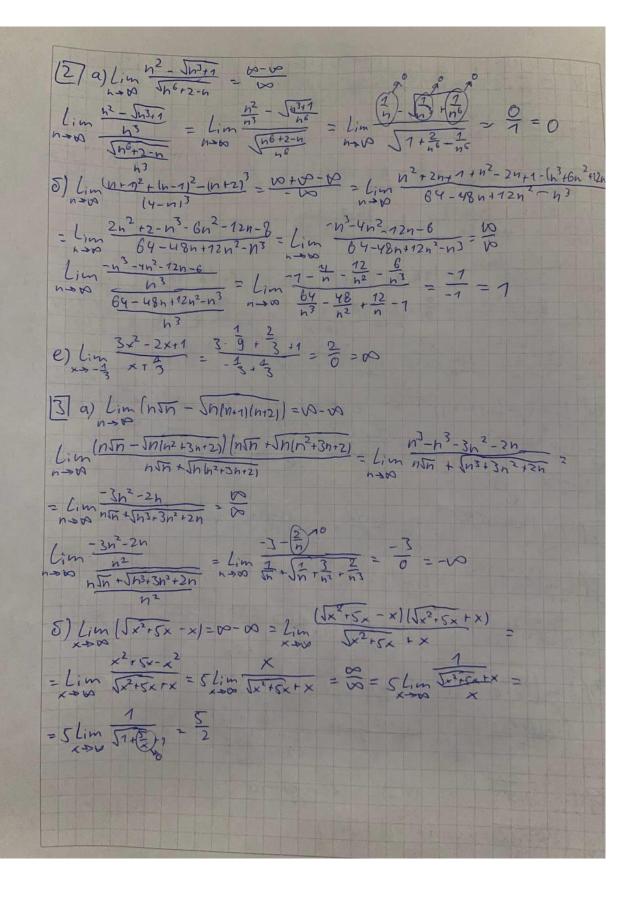
[7] Dax-16. Lim an = a an= 2n-1, a= 3 Budupalu moiglatorie 270 |3n-2 3 | 2 6 2(3n-2)-3(2n-1) | 22 6n-4-6n+3/2 & 1 2/2n-11 2 E 12n-1) > 2/2 \*olymne/N) 2n-1> 1/2 2n7 22 + 1 h> 2 (22+1) Buruaumb Hegeria Zucioliux hoci-n

[2] Lim [3-n]2+(3+n)2 > 12 | 2-10 = Lim g-6n+n2+9+6n+n2 = Lim g-6n+n2-9-6n-n2 = Lim n-10 Lim h35h2 + 49h2+1 = lim 11+ 49+ h2+0 = 49 = 13

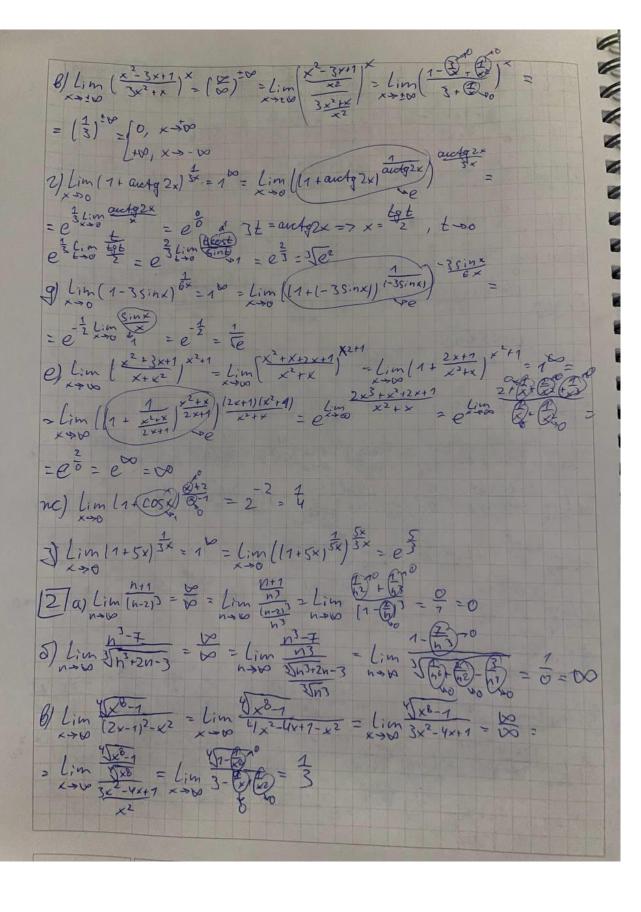


[87 Dx-18: f(x) Hengep. b Xo, reainer 5(2), f(x)=5x2-1 Xo=6 15x2-1-179/18 15x2-180/28 51x2-36/28 1(x-6)(x+61) 2 5 5 |x+6| 1 5 0252 51×+61 197 Lim (x3-2x-1)(x+1) = 0 Lim (x+1)(x2-x-1)(x+1) 1-0 (x+1)(x3-x2+54-5) = -12 = 0 107 lim 5x-2 = 0 Lim (57+2x-3) (51+2x+3) (5x)+2) = 4 Lim x-4 = 3 Lim x-4 = 3 771 Lim Sin4(x-11) = 0 = Lim Sinx (2 Sin 2(x-11) (0521x-11) = = = Lim 2-2 sin(x-11) = - 4 lim -sin(x-x) = 4 lim sinx = 4



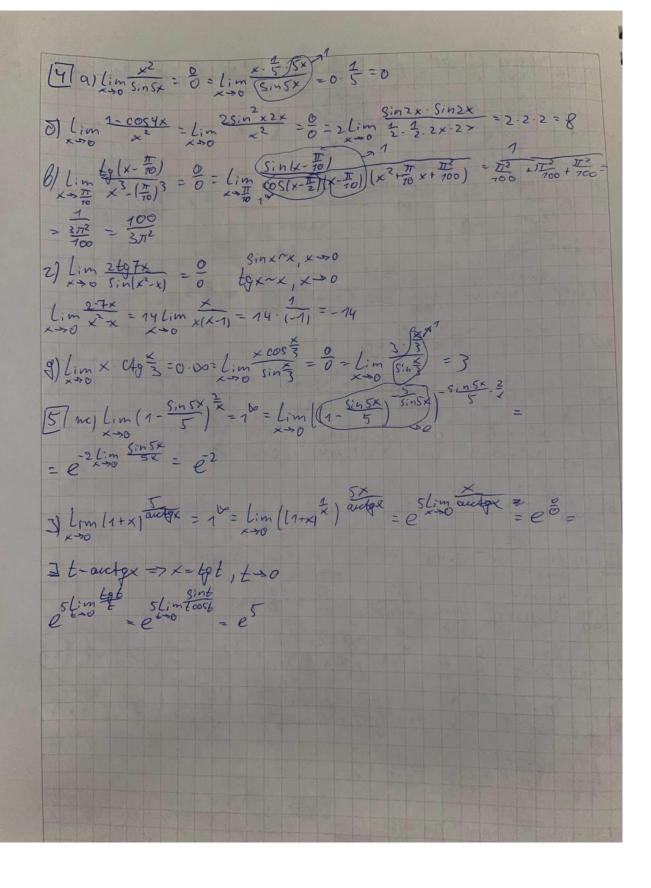


b) lim x+x2 = 0 = Lim (x+x2) (\$\(\text{8}\) +2\(\text{8}\) +2\(\text{8}\) +3\(\text{8}\) +3\(\text{8}\) +2\(\text{8}\) +3\(\text{8}\) +3\(\te = 12 lim 8+3x+x+8 = 12 lim x (3+x) = 12 · 3 = 4 2) Lim Juix - Ju-x = 0 = Lim 2x (Juix + Ju-x) = 8 Lim 21+x-4+x = 8 Cim 2x = 8 2 = 4 [47a] Lim 3x = 0 = Lim 3.5x = 3  $\int \lim_{x\to 0} \frac{\sin(x+\delta) + \sin(x-\delta)}{2\pi} = \frac{0}{0} = \lim_{x\to 0} \frac{2005\left(\frac{x+\delta - (x-\delta)}{2}\right) \sin\left(\frac{x+\delta + x-\delta}{2}\right)}{2\pi}$ = Lim 2005 8. nx) = 2005 5 B/Lim (5in2x - 1/5in2) = 60 - 60 = Lim (1/2 Sin2 cos2)2 - 4 Sin2) = Lim ( \frac{1}{4\sin^2 \times (05^2 \times)} - \frac(05^2 \times)} - \frac{1}{4\sin^2 \times (05^2 \times)} - \frac{1 2) Lim Sinx-63x = 0 = Lim Sinx Sin3x = 2 Lim Sin4x = 0 Sinx~x 2 Lim xx = 2 Lim xx = 2 Lim xx = 2 Lim xx の Lim x2- 元 20 = Lim (x-元 | x+元 | 2 Lim ( = - 51 [5] a)  $\lim_{x\to 0} \frac{1-\cos 5x}{x^2} = \frac{0}{0} = \lim_{x\to 0} \frac{2\sin^2(\frac{5}{2}x)}{x^2} = \lim_{x\to 0} \frac{4}{25} \cdot \frac{5x}{3} \cdot \frac{5x}{3}$ 8) Lin (3x-4) = Lim (3x+3) = Lim (3x-4) = Lim (3x-4) = Lim (1+3x-4) =1 = Lim ( 1+3x-1) = Plin 5x-2 | Thin 5x-2



2) lim 3x2-9 = Lim 4x2+16-x2+2x-1 = lim 3x2+18x+15 = 8= 8x2+18x+15  $= \lim_{x \to \infty} \frac{8x^2 + 18x + 15}{3x^2 - 9} = \lim_{x \to \infty} \frac{3 + \frac{18}{x^2} + \frac{1}{25} + 0}{3 - \frac{1}{25}} = \frac{3}{3} = 1$ 9) Lim (2xy -2x) = Lim 2x -2xy+2x = Lim x3-7 = Lim x3-7 = Lim x3-7 = = Lim (2 370) > 7 = 0 e) lim x+1 = \( \sigma = \lim \frac{\frac} nc) lim = 4-4 - 4-4 = 8 = 0 3) lim 22-9 = 0 = lim (x-3)(x2+3x+9) = 9+9+9 = 27

x=3 | lim x2-9 = 0 = lim (x-3)(x+3) = 6 = 6 u)  $\lim_{x^2+x-6} \frac{0}{3x^2-2x-8} = \frac{0}{0} = \frac{[x-2)[x+3]}{[x-2][3x+4]} = \frac{z+3}{6+4} = \frac{1}{10} = \frac{1}{2}$ k) lim x-3 -3 - 0 = 60 [3] a) Lim (2/2-x-4) = (w-w) = Lim (2/x) (2+x) = = Lim (2-x)(2+x) - Lim [2xx)(2+x) = 04 = 6 = 0 B) lim 50x-1-1 = 0 = Lim (510x-1+1) (510x-1-1) (55x+1) = 2 (im 5x-1-1) (50x-1-1) (55x+1) = 2 (im 5x-1-1) (50x-1-1) (50x-1-1) = Lim 5x-1 = Lim 5x-1 = 2 2) Lim ( J2-3-x)x = (10-10) to = Lim (Jx2-3-x) (Jx2-3+x)x = Lim (x2-3-x2), =-3 lim Je-3+x = 10 = -3 lim = -3 lim J-3+1 = -3. [71] = -2



[6.17 Lim 13, 32 + 1 + 3"] S- 1-9 13 = 13 = 2 6.27 Lim Sinh! = Lim (Sinh! in) = 0

16.27 Lim Sinh! = Lim (Sinh! in) = 0

16.27 Lim Sinh! = Lim 2x2-3x-4

2x2-3x-4

2x2-3x-4

2x2-3x-4

2x4-1

2x4-1

2x4-1

2x4-1 = 2 lim 51+20 = 2 16.47 Lim 3x2+2x+3 = 00 = Lim x3 = Lim 4.8 = 4 = 0 6-57 Lim 2x+21 -- 10 = Lim 4x2+2x-7 = Lim 2 +27 = 0 = -10  $|6.6| \lim_{x^2+5x+6} \frac{x^2+5x+6}{x^2+x-2} = 0 = \lim_{x\to -2} \frac{(x+2)(x+3)}{(x-1)(x+2)} = \lim_{x\to -2} \frac{x+3}{x-1} = \frac{1}{-3} = -\frac{1}{3}$ 6.7/ Lim (x-10 - x2-64) = ((x-10) = Lim (x-8) - 1x+8)(x-8) = Lim (x-8)(x+8) = 2 - 1x+8)(x-8) = 2 - 1x+8 = Lim (x-8)(x+2) = Lim x+8 = 16 G.8/ Lin JY+x3-2 = 0 = Lim (J4+x3-21/54+x3+21 = Lim 4+x3-4 = = L:m ( \( \sqrt{\sq}}}}}}}}}}}}}} \simptintites \sqrt{\sq}}}}}}}}}}}} \signtimes \sqrt{\sqrt{\sq}\sqrt{\sq}}}}}}}}} \enditti\simptites \sqrt{\sinq}}}}}}} \end{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\s B. 9/ Lim (3(x+1)2-3(x-1)2)= (10-10)= Lim 3(x+1)2+3(x+1)2(x-1)2+3(x-1)4) = Lim 3[x+1]4 + 3[x+1]2 + 3[x+1]2 = Lim 3[x+1]4 + 3[x+1]2 + 3[x-1]4 = 6 = Cru 3/1x+1/4 +3/1x+1/2 +3/1x-1/4 = Cru 3/1+Q4 +3/1+Q7 =

6.10/ Lim Sin5x = 0 = Lim (5x) = 415 = 4 6.17 lim 6x5 = 0 tgx-x, x >0 Lim 8x5 = 8 6.127 Lim x2 = 0 = -2 Lim x2 = 2 Lim x2 = 2 Lim x2 = 2 Lim Siny Sinx = 2.4=8 137 Lim x 11-tox1 = 0 3t=x-4 => x= E+ 4 , t=0 Lim (t+\frac{\frac{1}{1-\frac{1}{2}\frac{1-\frac{1}{2}\frac{1-\frac{1}{2}\frac{1-\frac{1}{2}\frac{1-\frac{1}{2}\frac{1-\frac{1}{2}\frac{1}{2}\frac{1-\frac{1}{2}\frac{1-\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1-\frac{1}{2}\frac{1}{2}\frac{1-\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1-\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1-\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1-\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1-\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1-\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1-\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1-\frac{1}{2}\f = 4 lim 1 - (1-tgt) = 4 lim - (1-tgt) = 11-tgt) = 5 intcost = = 4 Lim [1-(5) Sint (052) = 4 6.147 Lim ausinx = 0 Sinx~x, ausinx~x, x Lim x = 1 B.157 Lim (1, 2)3x = Lim (1+ 2) = e6 6.16] Lim (2x-3)3x = (1/2) 1/2 - Lim (2x-3+3) x = Lim (1+2x-3) x= = 10= Lim (1+2x-3) 3-3x 9 lim 2x-3 9 lim 2-800 = 0 3 16.77 Lim (cos2x | sin2x = 160 = Lim (7-sin2x) sin2x = Lim (7+1-sin2x ) 1500x = 1 = 0-1

17.17 Lim ( 5/2 ) = W = Lim = = 10 Lim 12 = 10 Lim 12 = = 10 Lim (1+1) = 10 17.27 lin g"+4" = 00-00 = lim g" = lim 1+(4)" = 7=9 = 3 Lim (1-4)2 (1-2)3 = 3.1=3 17.47 Lim 4x2-3x2+8 = Lim 3x3+2x-3 = 100 = Lim x2+8 = 100 = Lim x2+8 = 100 = 1 = L:m 3+(2) = 0 = +00 77.5 LTM 3x6-2x+5 = W = Lim 3x6-2x+5 = Cim 3-2x+5 = 0 = 0 176 lim 2x2-5x+2 = 0 = lim (x-2)(x-1) 1 1 = 1 17.7/ Lim (2-16 x-4) = (00-00) = Lim (1x-4)(1x4) = Lim (x-4)(1x4) = = lim (x-4)(x+4) = - lim (x-4)(x+4) = - lim x+4 = - 2 1750 Lim x-5 - 0 = Lim (55x -x) (55x +x) = 10 Lim x-5 = 10 lim x-5 = - 10 lim x-5 = - 10.5 = - 2 1797 lim (Jx2+1 - Jx2+2x) = 10-10 = Lim Jx2+1 + Jx2+2x = Lim Jx211+Jx2+2x = Lim Jx21+Jx2+2x = 100 Jx211+Jx2+2x -Lim (1-2 = -2 = -1

17.10 Lim Sinyx = 65ty = = = = 1 17.11 Lin 43 = 0 = lim (3) = lim 27 = lim 23 = 27 (17.12) Lim x-Sin2x = 0 = Lim x-2sinxcosx = Lim x-2sinx = = lin Sinx = lin Sinx = Sino = 0 = 0 = 0 17,13 Lim It x = 0 x Jt= = + x => x = t- = , t +0 (in ctg(t-\frac{7}{2}) = lim \tag{-(\frac{7}{2}-t)} = -lim \tag{t} = -lim \tag{t} = -lim \tag{t} = - Lim cost = -1 17.147 Lim 5x = 0 h ] x=sint=> t=accginiz, t>0 Limsteint = 5 97.15 lim (1-2) = 16 = Lim (1+- x) = Lim e = -2 [17,16] Lim (x+2) = Lim (x+2+1) 2x+1 = Lim (1+x+2) = 10 2 lim (1+x+2) x+2 = (1m 2x+1) = (2m 2x+1) = 0 x x x = 0 x 1 1 2 x = 0 17.18 Lim (cosx) = 16 = Lim(1+(cosx-1)) = Lim((1+(cosx-1)cosx-1) = 2 47.19 Lim 5 = 51-11-01 = 1-1+0 = (10 = 100)