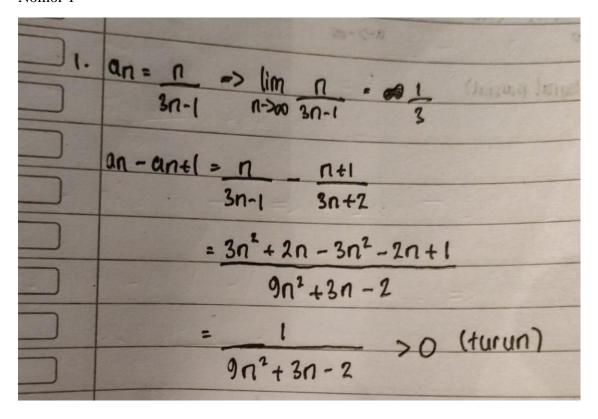
TUGAS KELOMPOK MINGGU 3

KALKULUS II

KEL 3

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Nomor 2

•				n+1							<u> </u>							
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	=	U,	+	3N2	+ 3	n		(n+	1)3+	3(n+1)	+ 3	(U+	()				
				11)		Γ			((n+	17+173								
	=	n ³	+	3Us	+ 3	n	_	Cn-	t1)3 t	3(4	1)2	+	3(1	1+1)			
			(1	UH)	3				•	(U+S)3							
									,									
	=	(n	†	3N -	130	١).	(n	+2)3	– (tn	+1)=+-	3(U	+11	13	(1+1). (r	(1+1)	2	
							(N+1)	3 (U4:	1)3								
																		-
		- 1	2n2	_ 0	in -	13			20	(bar	1(0	n h	dono	MA	nail	(2		

3. $Q_n : (US NT) = -1 \le COS NT \le 1$ $\frac{-1}{N} \le \frac{COS NT}{N} \le \frac{1}{N} \Rightarrow \frac{1}{N} \text{ fish fution}$ $\frac{1}{N} = \frac{1}{N} = \frac{1$

4	on = e sin n									
	Kekonvergenan									
	-en < en sin n < en									
	lim _en < lim en sinn < lim en									
	O Trareno O									
	OPA O									
	lim en sin n = 0 Konvergen ke-0									
	h → ∞									
	Kemonofonan									
	$\frac{a_{n+1}}{a_n} = \frac{e^{-n-1} \operatorname{Sin}(n+1)}{\operatorname{Sin}(n)} = \frac{\operatorname{Sin}(n) \operatorname{cos}(n)}{\operatorname{esin}(n)} + \frac{\operatorname{sin}(n) \operatorname{cos}(n)}{\operatorname{esin}(n)}$									
	on e-n Sin (n) e sin (n)									
	= (05(1) + Sin(1) cot(n)									
	e e									
	Cot memiliki botas - ao den ao mako									
	buken borrison monoton									

$$\lim_{n \to \infty} \frac{1}{n^3} = 0$$

kewooofoogo

$$\frac{3n}{3n\pi} = \frac{\frac{1}{n^3}}{\frac{1}{(n\pi)^3}}$$

$$= \frac{(n\pi)^3}{n^3}$$

$$= \frac{n^2 + 3n^2 + 3n + 1}{n^3}$$

$$= \frac{1}{n^3} + \left(\frac{3n^2 + 3n + 1}{n^3}\right) > 1$$
(Eurum)

Nomor 6

6 1 1	* kemonotonan
2 ² 2 ³ 2 ⁴	$\frac{\alpha_n}{\alpha_{n+1}} \Rightarrow \frac{1}{1}$
x Pumus eksplisit	2nt2
0.2-1	= 2 ⁿ⁺² / _{2 n+1}
2n+1	= 2 ⁿ . 9
☆ Kekonvergenan	2 ⁿ . 2
$\lim_{h\to\infty} \frac{1}{2^{h+1}} = 0 \text{ (konvergen to 0)}$	= 2
h→ 00 2 MT	ant >1, maka monoton turun

7) Sin 1,
$$2 \sin \frac{1}{2}$$
, $3 \sin \frac{1}{3}$, $4 \sin \frac{1}{4}$

Numus eksplisit \Rightarrow $\frac{1}{8}$ an = $n \sin \frac{1}{n}$

Konvergen

Lim an \Rightarrow $\lim_{n\to\infty} n \cdot \sin \frac{1}{n}$

Misal $\frac{1}{n} = t$; $\frac{1}{8} = n = \frac{1}{t}$.

= $\lim_{t\to 0} \frac{\sin t}{t}$

= 1.

An konvergen menuju ke 1,

8) 0.1, 0.11, 0.111, 0.1111, ---

* Rumus eksplisit:

$$=\frac{1}{9}\left(1-0.1,1-0.01,1-0.001,-.\right)$$

$$= \frac{1}{9} \left(1 - \left(\frac{1}{10} \right)^{1}, 1 - \left(\frac{1}{10} \right)^{2}, 1 - \left(\frac{1}{10} \right)^{3}, \dots \right)$$

$$= \frac{1}{9} \left(1 - \left(\frac{1}{10} \right)^n \right)$$

* Fekonvergenan

$$\lim_{N\to\infty} \frac{1}{9} \left(1 - \left(\frac{1}{10}\right)^n\right) = \frac{1}{9} \left(1 - 0\right) = \frac{1}{9}$$
Konvergen menuju 1/9