TUGAS KELOMPOK RESPONSI 3



Kelompok 9:

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an=3n-1	1 - 19 E - 119 E
·> kekonvergenan	→ Kemonotonan
	$a_n - a_{n+1} = \frac{n}{n} - \frac{n+1}{n}$
$a_n = \frac{1}{3n-1}$	3n-1 3(n+1)-1
$= \lim_{n \to \infty} \frac{n}{3n-1}$	$\frac{n}{n} = \frac{n+1}{n}$
n->00-3N-1	3n-1 3n+2
_ n/n	$= \frac{(3u-1)(3u+x)}{u(3u+x)-u+(3u-1)}$
$= \frac{3n/n - 1/n}{n}$	(3n-n(3n+2)
	2
$=\frac{1}{3-0}=\frac{1}{3}$	$(\text{Vonvergen}) = \frac{311 + 211 - (31)}{312 + 312 + (31)}$
5.0 3	911-311 + 611-2
	= 1 >0 TURUN
327	= 1 9n2+3n-2 70 TURUN
$0 = n^3 + 3n^2 + 3n$	•
$a_n = \frac{n^3 + 3n^2 + 3n}{(n+1)^3}$	•
	The second secon
	The second secon
$a_n = n^3 + 3n^2 + $	$\frac{1}{3n} \frac{\sqrt{kemonotonan}}{\sqrt{n^5+3n^2+3n}} = \frac{(n+1)^3+3(n+1)^2+3(n+1)}{(n+1+1)^3}$
$a_n = n^3 + 3n^2 + $	$\frac{1}{3n} \frac{\sqrt{kemonotonan}}{\sqrt{n^5+3n^2+3n}} = \frac{(n+1)^3+3(n+1)^2+3(n+1)}{(n+1+1)^3}$
	$\frac{3n}{3n^{2}+3n} \xrightarrow{(n+1)^{3}+3(n+1)^{2}+3(n+1)} \frac{(n+1)^{3}}{(n+1)^{3}} = \frac{(n+1)^{3}+3(n+1)^{2}+3(n+1)}{(n+1+1)^{3}} = \frac{(n+1)^{3}+3(n+1)^{2}+3(n+1)}{(n+1)^{3}+3(n+1)} = \frac{(n+1)^{3}+3(n+1)^{3}+3(n+1)}{(n+1)^{3}+3(n+1)} = \frac{(n+1)^{3}+3(n+1)^{3}+3(n+1)}{(n+1)^{3}+3(n+1)} = \frac{(n+1)^{3}+3(n+1)^{3}+3(n+1)^{3}+3(n+1)^{3}}{(n+1)^{3}+3(n+1)^{3}+3(n+1)^{3}+3(n+1)^{3}+3(n+1)^{3}} = \frac{(n+1)^{3}+3(n+1)$
$a_{0} = \frac{1}{(n+1)^{3}}$ $= \lim_{n \to \infty} \frac{n^{3}+3n^{2}+3n^$	$\frac{3n}{3n^{2}+3n} \xrightarrow{\frac{n^{5}+3n^{2}+3n}{(n+1)^{3}}} \frac{(n+1)^{3}+3(n+1)^{2}+3(n+1)}{(n+1+1)^{3}} \frac{3n^{2}+3n}{3n^{2}+3n+1} \xrightarrow{\frac{n^{3}+3n^{2}+3n}{(n+1)^{3}}} \frac{(n+1)^{3}+3(n+1)}{(n+1)^{3}} \frac{(n+1)^{3}}{(n+1)^{3}}$
$a_n = n^3 + 3n^2 + $	$\frac{3n}{3n^{2}+3n} \xrightarrow{(n+1)^{3}+3(n+1)^{2}+3(n+1)} \frac{(n+1)^{3}}{(n+1)^{3}} = \frac{(n+1)^{3}+3(n+1)^{2}+3(n+1)}{(n+1)^{3}} = \frac{n^{3}+3n^{2}+3n}{(n+1)^{3}} = \frac{(n+1)^{3}+3(n+1)^{2}+3(n+1)}{(n+2)^{3}} = \frac{(n+1)^{3}+3(n+1)^{2}+3$
$a_{0} = \frac{1}{(n+1)^{3}}$ $= \lim_{n \to \infty} \frac{n^{3}+3n^{2}+3n^$	$\frac{3n}{3n^{2}+3n} \xrightarrow{\frac{n^{3}+3n^{2}+3n}{(n+1)^{3}}} \frac{(n+1)^{3}+3(n+1)^{2}+3(n+1)}{(n+1+1)^{3}} \frac{(n+1)^{3}}{3n^{2}+3n+1} \frac{n^{3}+3n^{2}+3n}{(n+1)^{3}} \frac{(n+1)^{3}+3(n+1)}{(n+1)^{3}} \frac{(n+1)^{3}}{(n+1)^{3}}$

$\alpha^{\nu} - \alpha^{\nu+1} = \frac{\alpha_3 + 3\nu_7 + 3\nu}{(\nu+1)^3} - \frac{(\nu+1)^3}{(\nu+1)^3}$	$1)^{3} + 3(n+1)^{2} + 3(n+1)$
$\alpha_{n} - \alpha_{n+1} = \frac{(n+1)^{3}}{}$	((n+1)+1)3
	n2+3n+1+3n2+6n+3+3n+
$= \frac{(u+1)_3}{u_3+3u_5+3u} - \frac{u_3+3}{u_3+3}$	(0+2)3
n3+2n2+2n n3+	603+130+6
$= \frac{(\nu+1)_3}{(\nu+1)_3} - \frac{\nu_3+1}{\nu_3+1}$	(n+2)3
	-(n3+6n2+12n+5)(n+1)3
(n+1) ³ (n+	2)3
$= \frac{-3n^2 - 9n - 7}{(n^2 + 3n + 2)^2} < 0 \text{ N}$	Alk
$a_n = \frac{\cos n\pi}{n}$	
n // //	
> kokonvergenan > kemonot	onan .
-1 < corna <1 an-anz	$\frac{\cos n\pi}{\cos (n+1)\pi}$
-1 < corn = < 1	
<u></u>	=(n+1) cos n= - n (cos (n+1)=)
$\lim_{n\to\infty} -\frac{1}{n} = 0$	n (n+1)
n-10 (konvergen)	(U+1) COS UIT - U (COS (U+1) II)
· lim 1 - 0	05+W
n-700 N	TIDAK TURUN DAN
14334	TIDAK NAIK

of and large will

$4.a_n = e^{-n} \sin n$	THE POST OF STREET
> Kekonverganan	> komenotonan
$a_0 = e^{-n}$ sin 0	an-ann = e- sin n - (e-(n+1) sin (n+1))
e lim e-n sinn	= sin n _ sin (n+1)
n→∞	en enti
$= \lim_{n \to \infty} \frac{e_n}{s_{lu} u}$	= sinn (enti) - sin (nti) (en)
v->∞ 6	en. enti
= 0 (Vanvergen)	= &" (esin n - sin (n+1))
	80. ent1
	= e sinn-sin(n+1) > O (TUPU)
S. an = 1	e".e
-> Kakonvergenan	·> Komonotonan
$\frac{1}{1} = \frac{1}{1} = \frac{1}$	an 1/n3
11-200 Us U. W.	ant 1/(0+03
= 0	$=(n+1)^3$
	N3
= O Ukonu	$vergen) = n^3 + 3n^2 + 3n + 1$
	u,
	$= 1 + \frac{3n^2 + 3n + 1}{n^3} > 1 TURUH$
$6 \cdot \frac{1}{2^2} \cdot \frac{1}{2^3} \cdot \frac{1}{2^4} \cdot \cdots$	
? Rumus Eksplish	·>kekonverganan
$U_{n=\alpha,\Gamma^{n-1}}$ $= \frac{1}{2^{2}} \cdot \left(\frac{1}{2}\right)^{n-1}$	$\Rightarrow \forall n = \frac{1}{2^{2+n-1}} \lim_{n \to \infty} \frac{1}{2^{n+1}} = O\left(konvergen\right)$
2 (2)	$' = \frac{1}{2^{n+1}}$
= 1	1 1

7. sin 1, 2 sin 1, 3 sin 1, 4 sin 1, ... > FUMUS Eksplisit .) Kekonvergeran lim n sin 1 = $\Omega_n = n \sin \frac{1}{n}$ 1-100 L.H= lim (-cos +) = cos (=) n=1,2,3,... = cos 0° = 1 8. 0.1,0.11,0,111,0,1111,... ·> Rumw Eksplisit (konvergen) 0.1, 0.11, 0.111, 0,1111, ... = 1 (0.9, 0.99, 0.999, 0.999, ...) $=\frac{1}{9}(1-0.1,1-0.01,1-0.001,1-0.0001,...$ = = (1-(10)) ·> Yekonvergenan (im 11-700 = 1 (Konvergen)