	4
a. $\lim_{x \to 1} x^2 + 1$	E-3
<i>α</i> →1 ⁻ <i>α</i> -1	हरण हिनेताः स्थानित ने राज्य
lim ~2 1 1 - 2 > 0	स्थानक विकास सिर्वाम स्थानिताल के निवास
×+1-	22-4 0
g(x) = x - 1 atan menuju o dari o	arah bawah karena x mendetati 1
dari kiri berarti x lebih kecil dari	1, akibatnya x-1 akan bernilai negatif
sehingga	5 + 2
$\lim_{x \to 1^{-}} \frac{x^2 + 1}{x - 1} = -\infty$	9.17) = \ x - 2
x→1 ⁻ x -1	2=2 (8.)
	+(2) = 8
b. $\lim_{x \to \infty} x^2 + 1$	mi (x-x) (x-x) (mi (x-x) (mi x-x
	x = (x-x) x+x x-x x+x
$\lim_{x\to 1^-} \frac{x^2+1}{(x-1)(x+1)}$	(c) + (c) + (c)
$x \rightarrow 1^{-1} (x-1)(x+1)$	production of the second of th
lim 2 1	Paris status suma diagon adal parist
$x \rightarrow 1^{-} (x-1)^{2} x-1$	the part of the parties of the parties
sage $x \rightarrow 1^-$, $x-1 \rightarrow 0^-$ Sehingga	
$1 \text{im} \qquad \chi_{5-1} = -\infty$	22 2 2 2 1 4 7 . 7 - Crost
x →1- x2-1	1.5 1.5 4 p. 1.5 5 p. 1.5 7 p.
	E= 1- 2 = (3)
c. lim x	ting course and services and
x→π+ sinx	100 Jes 144 A
$\lim_{x \to \pi^+} x = \pi > 0$	res to the first the second
	20 x 10 1 70 0 x
Jika x menuju π dari arah kanan mo	
dani arah bawah (arah nilai sin 7 neg	Jatit)
Sehingga	Du Rollman Gode . Howell in west literated in
1im ×	
$\pi \rightarrow \pi^{+} \widehat{\sin} \pi^{-} \infty$	

2. a. $f(x) = \frac{x^2 - 4}{x - 2}$

f(n) tidak kontinu di n=2

karena fungsi tidak terdefinisi di x=2

$$\frac{2^2-4}{2-2} = 0$$

Ь.

$$f(x) = \begin{cases} \frac{x^2-4}{x-2}, & x \neq 2 \\ 3, & x = 2 \end{cases}$$

f(2) = 3

$$\lim_{x \to 2} \frac{x^2 - 4}{x - 2} = \lim_{x \to 2} \frac{(x - 2)(x + 2)}{(x - 2)} = \lim_{x \to 2} \frac{x + 2}{x + 2} = 4$$

 $\lim_{x\to 2} f(x) \neq f(2)$

limit tidak sama dengan nilai fungsi

maka f(x) tidak kontinu di x=2

c.
$$f(\pi) = \begin{cases} x+1, x < 2 \\ x^2-1, x \geq 2 \end{cases}$$

 $f(2) = 2^2 - 1 = 3$

$$\lim_{x \to 2^{-}} f(x) = \lim_{x \to 2} x + 1 = 3$$

 $\frac{1 \text{ im}}{x \to 2^{+}} f(x) = \frac{\text{ lim}}{x \to 2} x^{2} - 1 = 3$

$$\lim_{x\to 2} f(x) = f(2)$$

memenuhi semua syarat, f(x) kontinu di x=2

2-2" Produces & present yound down this depress note to ke (w)! रिवार देखें विस्तार्यों ज एकांचे विद्या त्याचे हैं, या कियोगपुत्र मान्य बन्धात बन्धात्य

TO + 1-8 , TI + 8 980 F45%

1-7% J. F. C. X.

tha is presented it, day arous screek when the state in

77.5

3. $f(x) = \begin{cases} x^2 + b, x < 1 \\ ax, x > 1 \end{cases}$ animist manifold . f kontinu di x=1 jita f kontinu kiri dan kontinu kanan di x=1 $f(1) = \frac{1}{x + 1} f(x) = \frac{1}{x + 1} f(x)$ $a = \lim_{x \to 1} x^2 + b = \lim_{x \to 1} ax \iff a = 1 + b = a \iff b = a - 1$ $f(1) = \lim_{x \to 1^{-}} f(x) - f(1) = \lim_{x \to 1^{-}} x^{2} + b - a + 1$ x2 + (a-1)-a- 1 ways some source asimist midag $\lim x^2 - 1$ x + 1 x - 1 (3-1)(x+1) xs + xxParyreput Jama Langon na x→1 x-1 000 4000 1000 10000 $f_{+}(1) = \lim_{x \to 1^{+}} f(x) - f(1)$ $= a \lim_{x \to 1} \frac{x-1}{x-1} = a$ प्रमा हमा लो रहम ह $f_{-}(1) = f_{+}(1) \rightarrow 0 = 2$ b = a - 1 = 2 - 1 = 1maka diperoleh: a=2 dan b=1 DOTTIM MOUNTED .

	the state of the s	
4.	Tentukan	asimtot

a.
$$f(\pi) = \frac{\chi^2 + 2\chi}{\chi^2 - 1}$$

$$\lim_{x \to 1^-} \frac{x^2 + 2x}{x^2 - 1} = -\infty$$

$$\lim_{\chi \to 1^+} \frac{\chi^2 + 2\chi}{\chi^2 - 1} = \infty$$

. asimtot datar

$$\lim_{x \to \infty} \frac{x^2 + 2x}{x^2 - 1} = \lim_{x \to \infty} \frac{1 + \frac{2}{x}}{1 - \frac{1}{x^2}} = \frac{1 + 0}{1 - 0} = 1$$

asimtot datar adalah y=1-(1-12)+ =x

. asimtot mining

tidak ada

b.
$$f(x) = \frac{x^2 + 2x}{x^2 + 1}$$

· asimtot tegat

Penyebut sama dengan nol

$$\chi^2 + 1 = 0 \rightarrow \chi^2 = -1$$
 (tidat ada solusi)

asimtot tegar tidak ada

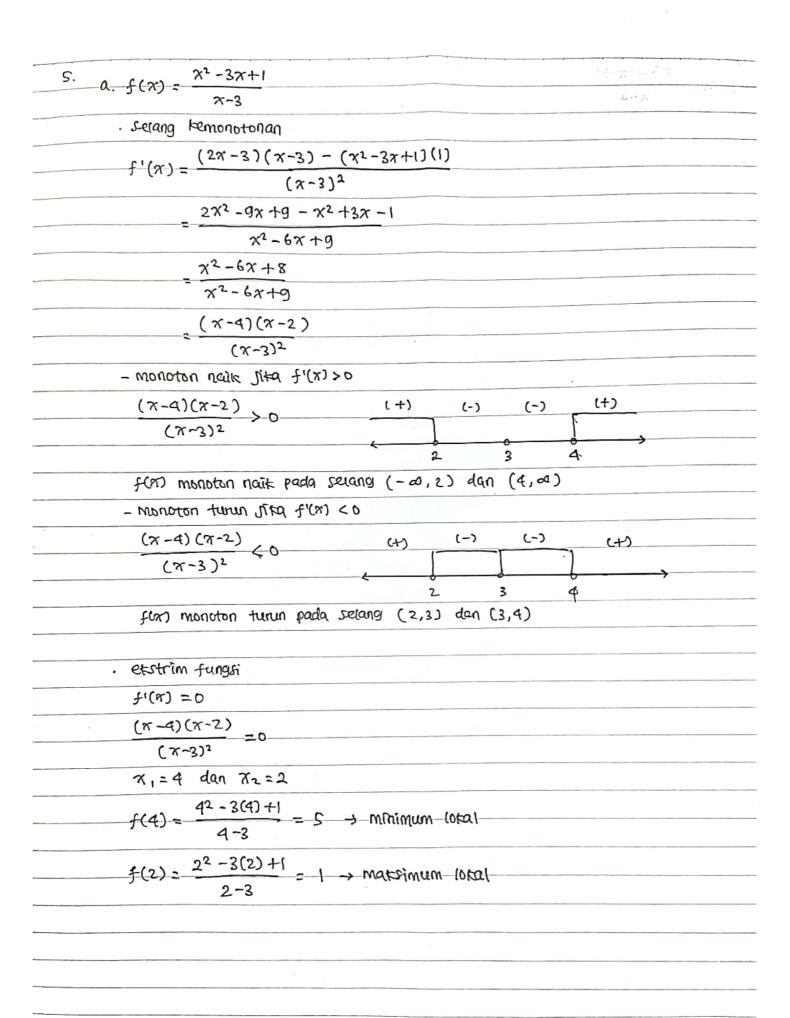
· asimtot datar

$$\lim_{x \to 0} \frac{x^2 + 2x}{x^2 + 1} = \lim_{x \to 0} \frac{1 + \frac{2}{x}}{1 - \frac{1}{x^2}} = \frac{1 + 0}{1 + 0} = 1$$

asimtot datar adalah y=1

ひって-こっし-ひって

. asimtof mirring



				 	
4	luas tulisan			- 14	I.
	(x-4)(y-8) = 50	CWs			a.
2 50 cm ² 2 y	xy-8x-4y+32	- 20		- V-1	
	74 - 87 -44 -18		A 225	7	
4	x(y-8)-4y-18=	-0 d			
< x ·	$\chi = \frac{4y+}{y-}$	18 211	d	N	- 0 -
9-7	10++11: 2 -	3 7.20		· ang.	
	1				
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y-8	200.00000000000000000000000000000000000		4 100	e 1173	
	u' = 84 +18				
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(4	-8) ²	9 4 11/2	1		
842 - 464 - 199		0.500	. W		
(4-8)	2	ton2 5	1		
442-649-19			100		
=>- (4-8)2 W	20	NE	- D nel		
4 (4+2)(4-18	Sips Mue C	I W W	0.310		
(y-8) ²	= ([ME/:100+)9:	1 1/2 Come.			
y =18 V y	= -2 (TM)	186			
, ,				(13) 9	J=}
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=> x = 18-8	$\frac{30}{10} = 9$		303 F	Sing ?	- (4
10 0		HINT.			
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		1 6,02	1 1		

7.	The part of the second of the part of the second
a h	11000 1 200 1
$\sin \theta = \frac{h}{a} \qquad \cos \theta = \frac{w}{b}$	tan-0 = Stn 0
$a = \frac{h}{\sin \theta} \qquad b = \frac{W}{\cos \theta}$	$\cos \theta = \frac{1}{\sqrt{1 + \tan^2 \theta}}$
total panjang tangga: $P(\theta) = \frac{h}{Sin \theta} + \frac{W}{cos \theta}$	$\frac{1}{\sqrt{1+\left(\frac{3}{N}\right)^2}} = \sqrt{1+\left(\frac{N}{N}\right)^2/3}$ $\sin \theta = \tan \theta \cdot \cos \theta$
Ponjang Minimum p((+) = 0	$= \sqrt[3]{\frac{h}{w}} \sqrt{1 + (h)^{2}}$
$P'(\theta) = \frac{h \cos \theta}{\sin^2 \theta} + \frac{w \sin \theta}{\cos^2 \theta}$	= \frac{\omega}{\omega}
$\frac{\cos^2\theta}{\cos^2\theta} = \frac{\sin^2\theta}{\cos^2\theta}$	1+ (h) ² 3
$\frac{h}{W} = \frac{8in^3\theta}{\cos^3\theta}$	$\sqrt{1+\left(\frac{h}{\omega}\right)^{2/3}}$ $\sqrt[3]{\frac{h}{\omega}}$
$\frac{h}{W} = \tan^3 \theta$	1 001- 404
$\tan \theta = \frac{3}{N} \frac{h}{W}$ $\theta = \tan^{-1} \left(\frac{3}{h} \right)$	(*(g-k))
$\theta = \tan^{-1}\left(\frac{3}{N}h\right)$ Substitusi te $\rho(\theta)$	to the V (a = v
$P(\theta) = \frac{h}{\sin \theta} + \frac{w}{\cos \theta}$	- 408 - 8 - 80 - 2 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1
$P(\tan^{-1}\left(\sqrt[3]{\frac{h}{\omega}}\right)) = h \cdot \frac{1 + \left(\frac{h}{\omega}\right)^{\frac{2}{3}}}{\sqrt[3]{\frac{h}{\omega}}} + W$	$\sqrt{1+\left(\frac{h}{w}\right)^{\frac{2}{3}}}$
$= \sqrt{1 + \left(\frac{h}{\omega}\right)^{2/3}} \left(\frac{h}{\sqrt[3]{\frac{h}{w}}}\right)^{2/3}$	+ W)