

① $f(x) = \frac{x^2+3}{x-1} = x+1 + \frac{4}{x-1}$

$D(f) = \mathbb{R} \setminus \{1\}$

Tangentsmetriks : $f(0) = \frac{3}{-1} = -3$
 $f(x) = 0$ nem lelet

①

Asimptotik:

Friggelages : $\lim_{x \rightarrow 1^+} \frac{x^2+3}{x-1} = +\infty$, $\lim_{x \rightarrow 1^-} \frac{x^2+3}{x-1} = -\infty$

$x=1$ ①

$\pm\infty$ -ben kerde asimptotik $x+1$,

w. $\lim_{x \rightarrow \pm\infty} f(x) - (x+1) = \lim_{x \rightarrow \pm\infty} \frac{4}{x-1} = 0$

②

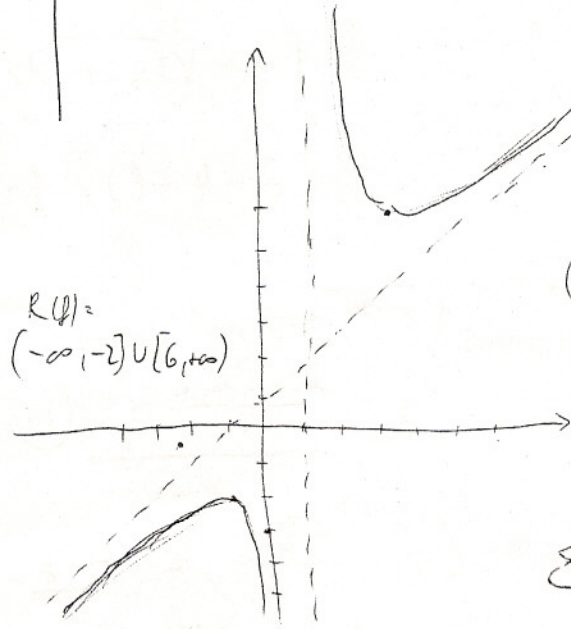
$f'(x) = 1 - \frac{4}{(x-1)^2} = \frac{(x-1)^2 - 4}{(x-1)^2} = \frac{(x-3)(x+1)}{(x-1)^2} = 0$, $x=3, -1$

③

$f''(x) = \frac{8}{(x-1)^3} \neq 0$ ④

	$-\infty$	-1	1	3	$+\infty$
f'	+		-		+
f''	-		-		+
	↗	↘	↘	↗	↗
	∪	∩	∪	∪	∪
		-2		6	
		MAX.		MIN.	

②



②

$R(f) = (-\infty, -2] \cup [6, +\infty)$

$\Sigma = 10$