3. $f(x) = \frac{x^2+5}{x-2}$ $\quad D_f = \mathbb{R} - \{2\}$

$$f'(x) = \frac{2x\cdot(x-2) - (x^2+5)\cdot 1}{(x-2)^2} = \frac{x^2-4x-5}{(x-2)^2}$$

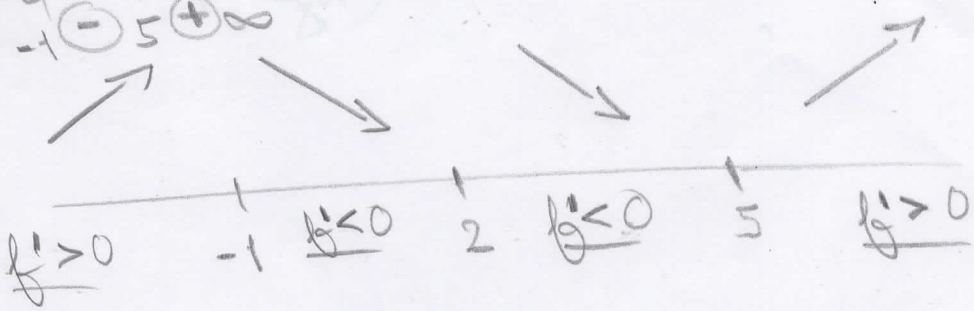
$$\left(\frac{a}{b}\right)' = \frac{a'\cdot b - a\cdot b'}{b^2}$$

$$f'(x) = 0 \iff x^2-4x-5 = 0$$

$$(x-5)(x+1) = 0$$

$$x=5 \vee x=-1$$

	$-\infty$		-1		5		∞
$x-5$		$-$		$-$	0	$+$	
$x+1$		$-$	0	$+$		$+$	
		$+$		$-$		$+$	



$\forall x \in (-\infty,-1): f'(x) > 0 \Rightarrow f$ roste

$\forall x \in (-1,2) \cup (2,5): f'(x) < 0 \Rightarrow f$ klesá na $(-1,2)$ a na $(2,5)$

$\forall x \in (5,\infty): f'(x) > 0 \Rightarrow f$ roste na $(5,\infty)$

$f(-1) = \frac{6}{-3} = -2$ $\quad$ lok. maximum: $[-1;-2]$

$f(5) = \frac{30}{3} = 10$ $\quad$ lok. minimum: $[5;10]$