ES. N° 11 PAG. 238

$$f(x) = \frac{2}{x-[x]} \qquad D_f: \{\forall x \in \mathbb{R} / x-[x] \neq 0\} =$$

$$= D_f: \{\forall x \in \mathbb{R} / x \neq [x]\}$$

$$D_f: \{\forall x \in \mathbb{R} / x \in \mathbb{R} - \mathbb{Z}\}.$$

ES. N° 13

$$f(x) = \frac{1}{|x+1|-|x|} \qquad D_f: \{\forall x \in \mathbb{R} / |x+1|-|x| \neq 0\} =$$

		-1		0	x
$x+1 \geq 0$	$x \geq -1$	$-$	$+$	$+$	
$x \geq 0$	$x \geq 0$	$-$	$-$	$+$	

Se $x < -1$ $\quad f_1(x) = \dfrac{1}{-\cancel{x}-1+\cancel{x}} \qquad f_1(x) = -1$

Se $-1 \leq x < 0$ $\quad f_2(x) = \dfrac{1}{x+1+x} \qquad f_2(x) = \dfrac{1}{2x+1}$

Se $x \geq 0$ $\quad f_3(x) = \dfrac{1}{\cancel{x}+1-\cancel{x}} \qquad f_3(x) = 1$

$$D_{f_1} = \{\forall x \in \mathbb{R} / x < -1\} = (-\infty; -1)$$

$$D_{f_2} = \left\{\forall x \in \mathbb{R} / \begin{cases} 2x+1 \neq 0 \\ -1 \leq x < 0 \end{cases}\right\} = \left[-1; -\tfrac{1}{2}\right) \cup \left(-\tfrac{1}{2}; 0\right)$$

$$D_{f_3} = \{\forall x \in \mathbb{R} / x \geq 0\} = [0; +\infty)$$

$$f_1(-1) = f_2(-1) = -1$$

$$f_2(0) = f_3(0) = 1$$

$$D_f = \left(-\infty; -\tfrac{1}{2}\right) \cup \left(-\tfrac{1}{2}; +\infty\right)$$

ES. N° 14

$$F(x) = \frac{x^2+3x-2}{x^2-2|x|+1} \qquad D_f: \{x \in \mathbb{R} / x^2-2|x|+1 \neq 0\} =$$

$x \geq 0$ $\quad$ $-$ $\underset{0}{\bullet}$ $+$ $\; x$

Se $x < 0$ $\quad f_1(x) = \dfrac{x^2+3x-2}{x^2+2x+1} \qquad D_{f_1}: \left\{x \in \mathbb{R} / \begin{cases} x < 0 \\ x^2+2x+1 \neq 0 \end{cases}\right.$

$$D_{f_1}: \left\{x \in \mathbb{R} / \begin{cases} x < 0 \\ x \neq -1 \end{cases}\right\} \Rightarrow (-\infty; -1) \cup (-1; 0)$$

Se $x \geq 0$

$$f_2(x) = \frac{x^2+3x-2}{x^2-2x+1} \qquad D_{f_2}: \left\{ x \in \mathbb{R} \Big/ \begin{cases} x \geq 0 \\ x^2-2x+1 \neq 0 \end{cases} \right\} =$$

$$= D_{f_2}: \left\{ x \in \mathbb{R} \Big/ \begin{cases} x \geq 0 \\ x \neq 1 \end{cases} \right\} \Rightarrow [0;1) \cup (1;+\infty)$$

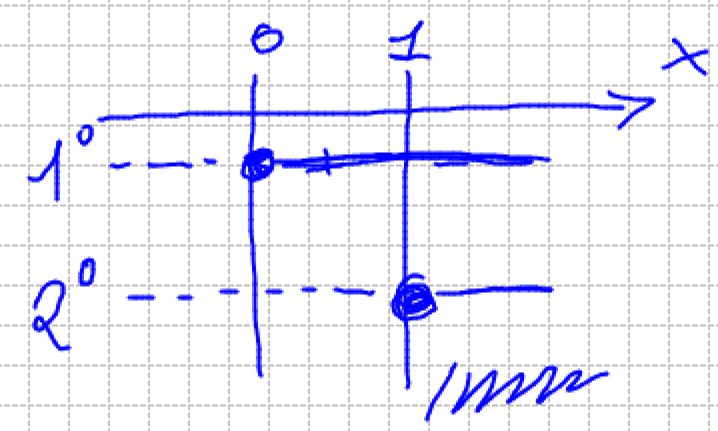
$f_1(0) = f_2(0)$

$$D_f = (-\infty;-1) \cup (-1;1) \cup (1;+\infty)$$

ES. N°29

$$f(x) = \sqrt{x} + \sqrt{x-1} \qquad D_f: \left\{ x \in \mathbb{R} \Big/ \begin{cases} x \geq 0 \\ x-1 \geq 0 \end{cases} \right\} =$$

$$= D_f: \left\{ x \in \mathbb{R} \Big/ \begin{cases} x \geq 0 \\ x \geq 1 \end{cases} \right\} \Rightarrow$$



$[1;+\infty)$