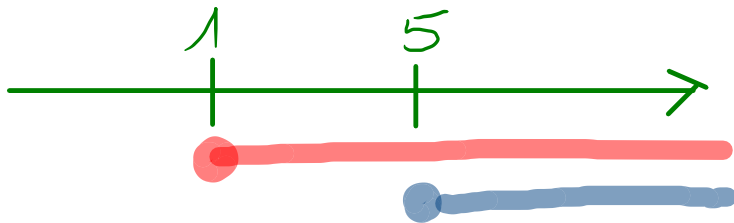


Ex 2.3.3

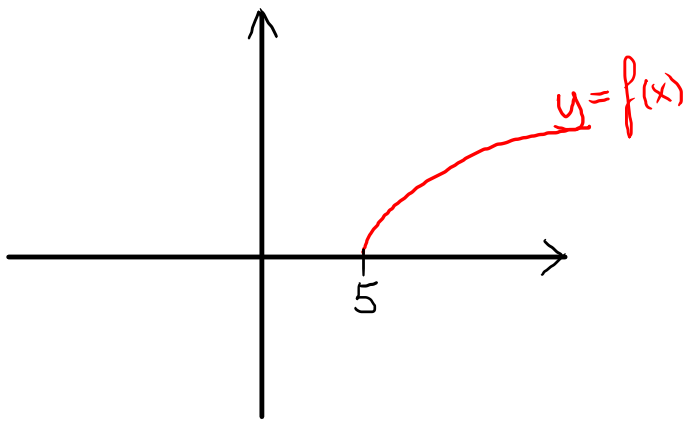
b) $f(x) = \sqrt{x-1} \sqrt{x-5}$

cond: $x-1 \geq 0$ et $x-5 \geq 0$

$x \geq 1$ (et) $x \geq 5$



$\Rightarrow \text{ED}(f) = [5; +\infty[$



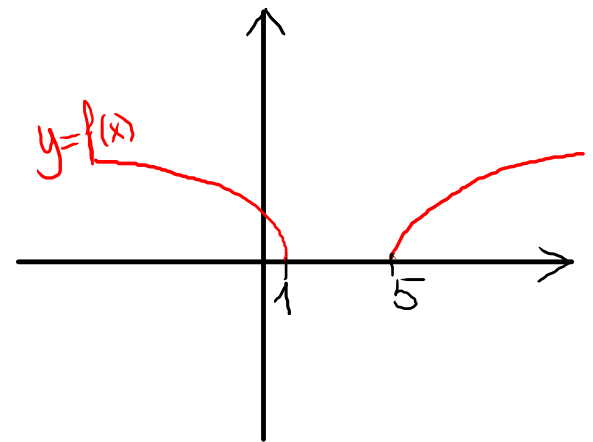
c) $f(x) = \sqrt{(x-1)(x-5)}$

cond: $(x-1) \cdot (x-5) \geq 0$

\downarrow \downarrow
1 5

x	1	5	
sgn(x-1)(x-5)	+	-	+

$\Rightarrow \text{ED}(f) =]-\infty; 1] \cup [5; +\infty[$



Ex 2.3.3

a) $f(x) = \sqrt{x^2 + x + 1}$

cond: $\underbrace{x^2 + x + 1 \geq 0}_{\Delta < 0}$ pas de zéro, tjs + car $a = 1 > 0$

$\Rightarrow \underline{ED(f) = \mathbb{R}}$

d) $f(x) = \frac{\sqrt{6-2x}}{x^2-5x+4}$

cond: $6-2x \geq 0$ et $x^2-5x+4 \neq 0$
 $3 \geq x$ $(x-1)(x-4) \neq 0$
 \downarrow \downarrow
 1 4

$\Rightarrow \underline{ED(f) =]-\infty; 3] - \{1\}}$

e) $f(x) = \sqrt{\frac{x+1}{x-4}}$

cond: $\frac{x+1}{x-4} \geq 0$

x	-1	4
$\text{sgn}(\frac{x+1}{x-4})$	$+$	$-$

$\Rightarrow \underline{ED(f) =]-\infty; -1] \cup]4; +\infty[}$

f) $f(x) = \frac{x^2+7x}{\sqrt{1-x^2}}$

cond: $\underbrace{1-x^2 \geq 0}_{1-x^2 > 0}$ et $\sqrt{1-x^2} \neq 0$

x	-1	1
$\text{sgn}(1-x^2)$	$-$	$+$

$\Rightarrow \underline{ED(f) =]-1; 1[}$