

FONCTION INVERSE

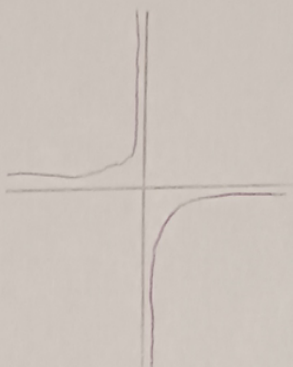
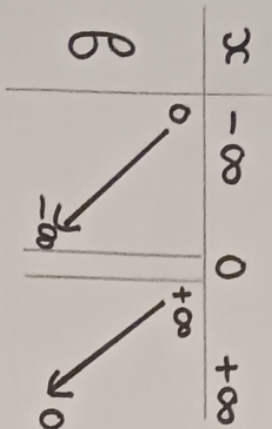
FONCTIONS USUELLES

FONCTION COSINUS

Sait $f: x \mapsto \frac{1}{x}$

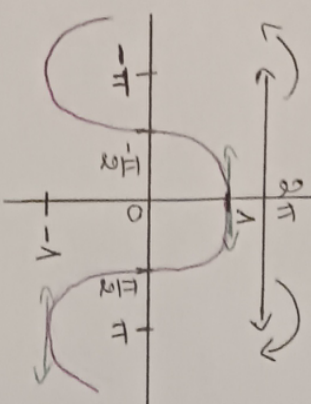
- $D = \mathbb{R}^*$
- $D' = \mathbb{R}^*$
- $A = \mathbb{R}^*$
- $f'(x) = -\frac{1}{x^2}$
- f est impaire

- $\lim_{x \rightarrow \pm \infty} f(x) = 0$
- $\lim_{x \rightarrow 0^+} f(x) = +\infty$
- $\lim_{x \rightarrow 0^-} f(x) = -\infty$



- $D = D' = \mathbb{R}$
- $A = [-1, 1]$
- $\cos'(x) = -\sin(x)$
- $\cos$ est paire et 2π -périodique

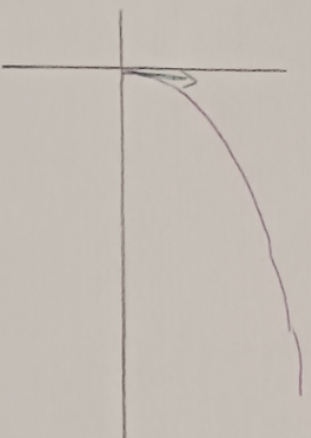
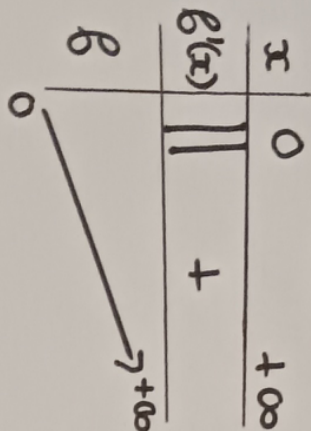
- $\cos(0) = 1$
- $\cos(\pi) = -1$
- $\cos'(0) = -\sin(0) = 0$
- $\cos'(\pi) = -\sin(\pi) = 0$



FONCTION RACINE CARRÉE

Sait $f: x \mapsto \sqrt{x}$

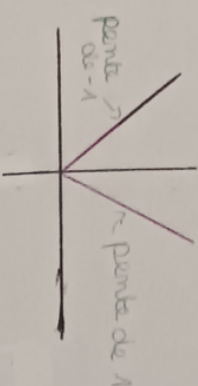
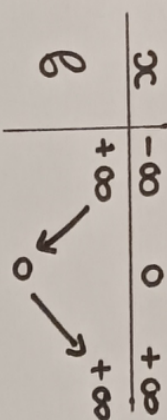
- $D = \mathbb{R}^+$
- $D' = \mathbb{R}^+$
- $A = \mathbb{R}^+$
- $f'(x) = \frac{1}{2\sqrt{x}}$
- $\lim_{x \rightarrow +\infty} f(x) = +\infty$
- $\lim_{x \rightarrow 0^+} f(x) = 0$
- $f(0) = 0$



VALEUR ABSOLUE

Sait $f: x \mapsto |x|$

- $D = \mathbb{R}$
- $D' = \mathbb{R}^*$
- $A = \mathbb{R}^+$
- $f'(x) = \begin{cases} -1 & \text{si } x < 0 \\ 1 & \text{si } x > 0 \end{cases}$
- $\lim_{x \rightarrow +\infty} |x| = +\infty$
- $\lim_{x \rightarrow -\infty} |x| = +\infty$
- f est paire



$D =$ domaine de définition
 $D' =$ domaine de dérivabilité
 $A =$ ensemble d'arrivée