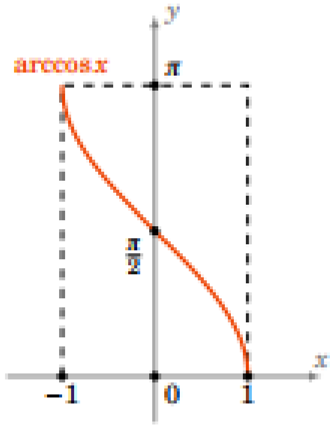
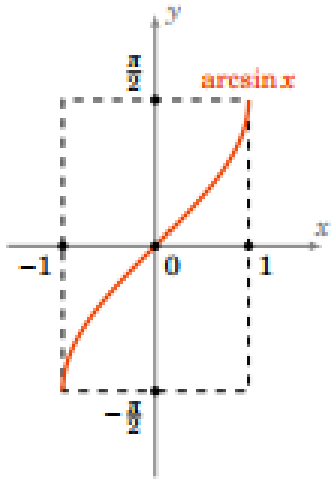
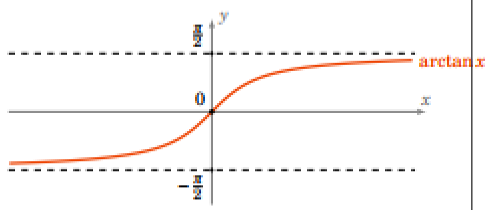
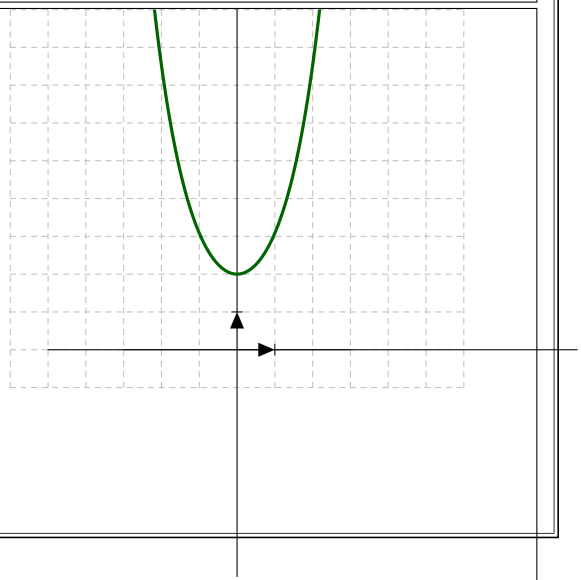
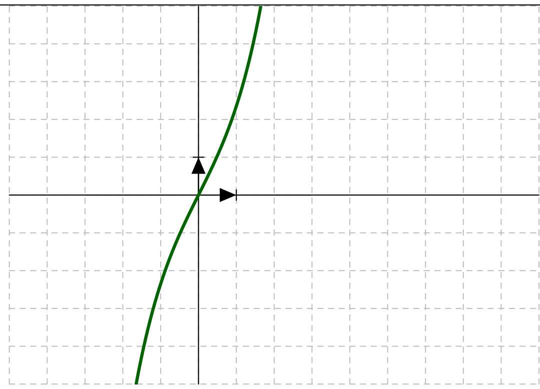
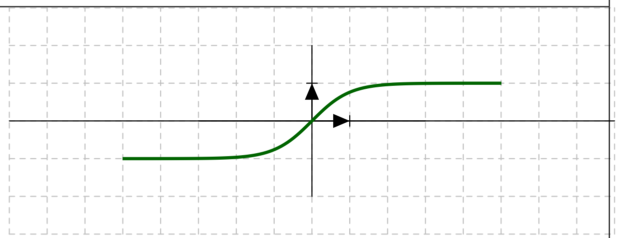
La fonction f	La répresentation de (C_f)
① $Arccos(x) : [-1;1] \longrightarrow [0;\pi]$, $Arccos(x) = cos^{-1}(x)$ On a $(Arccos(x))' = \dfrac{-1}{\sqrt{1-x^2}}, \forall x \in]-1;1[$ et $(Arccos(g(x)))' = \dfrac{-g'(x)}{\sqrt{1-g(x)^2}}$	
② $Arcsin(x) : [-1;1] \longrightarrow \left[-\frac{\pi}{2};\frac{\pi}{2}\right]$, $Arcsin(x) = sin^{-1}(x)$ On a $(Arcsin(x))' = \dfrac{1}{\sqrt{1-x^2}}, \forall x \in]-1;1[$ et $(Arcsin(g(x)))' = \dfrac{g'(x)}{\sqrt{1-g(x)^2}}$	
③ $Arctan(x) : \mathbb{R} \longrightarrow \left]-\frac{\pi}{2};\frac{\pi}{2}\right[$, $Arctan(x) = tan^{-1}(x)$ On a $(Arctan(x))' = \dfrac{1}{1+x^2}, \forall x \in \mathbb{R}$ et $(Arctan(g(x)))' = \dfrac{g(x)}{1+g(x)^2}$	
④ $ch(x) : \mathbb{R} \longrightarrow \mathbb{R}$, $ch(x) = \dfrac{e^x + e^{-x}}{2}$ On a $(ch(x))' = \dfrac{e^x - e^{-x}}{2} = sh(x)$	

⑤ $sh(x) : \mathbb{R} \longrightarrow \mathbb{R}$, $sh(x) = \dfrac{e^x - e^{-x}}{2}$ On a

$$(sh(x))' = \frac{e^x + e^{-x}}{2} = ch(x)$$



⑥ $th(x) : \mathbb{R} \longrightarrow \mathbb{R}$, $th(x) = \dfrac{sh(x)}{ch(x)}$



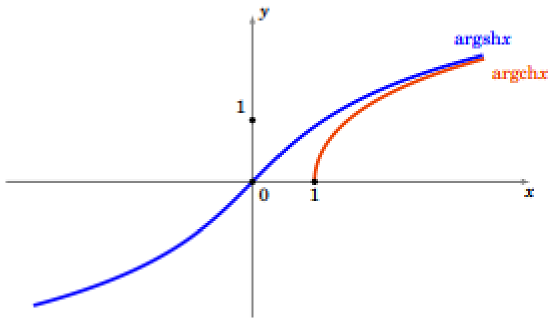
⑦ $Argsh(x) : \mathbb{R} \longrightarrow \mathbb{R}$, $Argsh(x) = sh^{-1}(x)$ On a

$$(Argsh(x))' = \frac{1}{\sqrt{1+x^2}}, \forall x \in \mathbb{R}$$

⑧ $Argch(x) : [1;+\infty[\longrightarrow [0;+\infty[$, $Argch(x) = ch^{-1}(x)$

On a

$$(Argch(x))' = -\frac{1}{\sqrt{x^2-1}}, \forall x > 1$$



⑨ $Argth(x) :]-1;1[\longrightarrow \mathbb{R}$, $Argth(x) = th^{-1}(x)$ On a

$$(Argth(x))' = \frac{1}{1-x^2}, \forall x \in]-1;1[$$