UAA 3 : Asymptotes et limites
Solutions

A. Limites en un réel

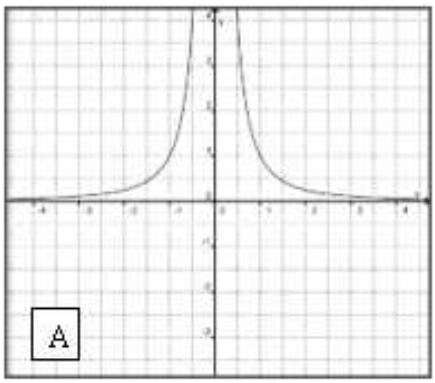
2. Définitions

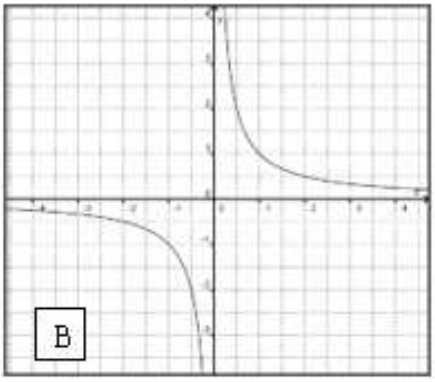
Exercices :

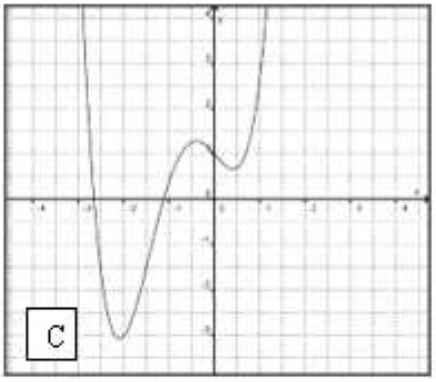
1. Associe chaque graphique à une ou plusieurs des limites ci-après :

(1) $\lim\limits_{x\to 0^-} f(x) = -\infty$ (3) $\lim\limits_{x\to 0} f(x) = -\infty$ (5) $\lim\limits_{x\to 0^+} f(x) = -\infty$ (7) $\lim\limits_{x\to 0} f(x) = 1$

(2) $\lim\limits_{x\to 0^-} f(x) = +\infty$ (4) $\lim\limits_{x\to 0} f(x) = +\infty$ (6) $\lim\limits_{x\to 0^+} f(x) = +\infty$ (8) $\lim\limits_{x\to 1} f(x) = 0$







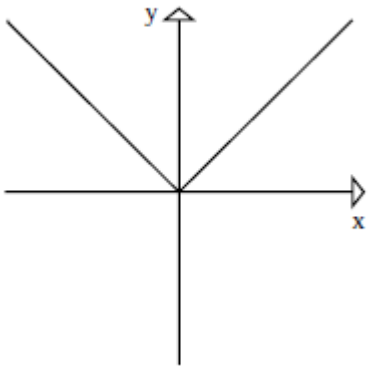
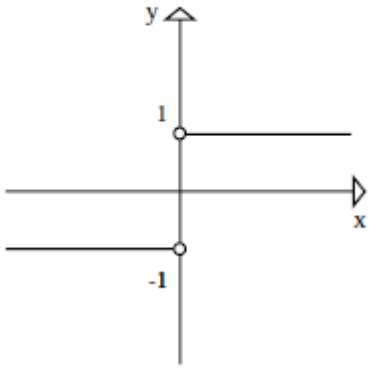
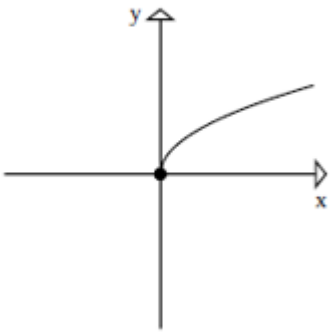
(1) -B	(3) – Aucun graphique	(5) – Aucun graphique	(7) – C
(2) - A	(4) - A	(6) – A et B	(8) – Aucun graphique

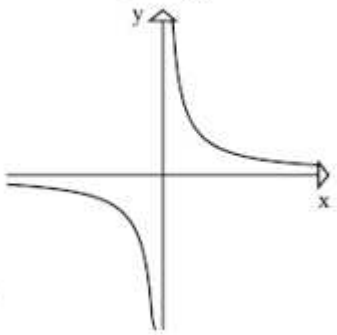
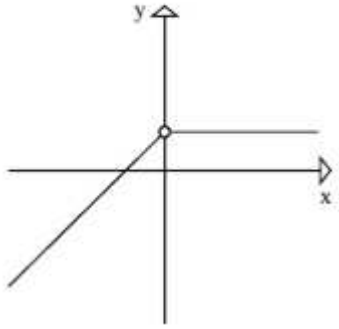
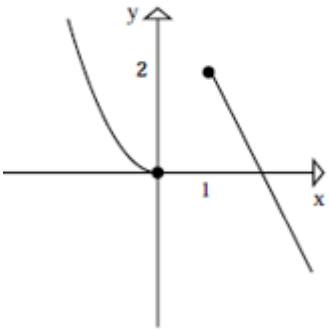
2. Détermine graphiquement chacune des limites :

a. $\lim_{x\to 0^+} f(x)$

b. $\lim_{x\to 0^-} f(x)$

c. $\lim_{x\to 0} f(x)$

	a.	b.	c.
$f(x)=\sqrt{x^2}$ 	0	0	0
$f(x)=\frac{\lvert x\rvert}{x}$ 	1	-1	N'existe pas
$f(x)=\sqrt{x}$ 	0	N'existe pas	0

$f(x)=\frac{1}{x}$ 	$+\infty$	$-\infty$	N’existe pas
$f(x)=\begin{cases} x+1 & x<0 \\ 1 & x>0 \end{cases}$ 	1	1	1
$f(x)=\begin{cases} x^2 & x\le 0 \\ 4-2x & x\ge 1 \end{cases}$ 	N’existe pas	0	0