



Aritmética de limites

Complete o quadro seguinte, considerando que a e b representam dois quaisquer números reais não nulos e c é um número real, $+\infty$ ou $-\infty$:

	$\lim_{x \rightarrow c} (f(x) + g(x))$	$\lim_{x \rightarrow c} (f(x) - g(x))$	$\lim_{x \rightarrow c} (f(x) g(x))$	$\lim_{x \rightarrow c} \frac{f(x)}{g(x)}$
$\lim_{x \rightarrow c} f(x) = a$ $\lim_{x \rightarrow c} g(x) = b$	$a + b$			
$\lim_{x \rightarrow c} f(x) = 0$ $\lim_{x \rightarrow c} g(x) = b$				
$\lim_{x \rightarrow c} f(x) = a$ $\lim_{x \rightarrow c} g(x) = 0$				
$\lim_{x \rightarrow c} f(x) = +\infty$ $\lim_{x \rightarrow c} g(x) = b$				$+\infty$, se $b > 0$ $-\infty$, se $b < 0$
$\lim_{x \rightarrow c} f(x) = -\infty$ $\lim_{x \rightarrow c} g(x) = b$				
$\lim_{x \rightarrow c} f(x) = a$ $\lim_{x \rightarrow c} g(x) = +\infty$				
$\lim_{x \rightarrow c} f(x) = a$ $\lim_{x \rightarrow c} g(x) = -\infty$				
$\lim_{x \rightarrow c} f(x) = \pm\infty$ $\lim_{x \rightarrow c} g(x) = 0$				
$\lim_{x \rightarrow c} f(x) = 0$ $\lim_{x \rightarrow c} g(x) = \pm\infty$				
$\lim_{x \rightarrow c} f(x) = +\infty$ $\lim_{x \rightarrow c} g(x) = +\infty$				
$\lim_{x \rightarrow c} f(x) = +\infty$ $\lim_{x \rightarrow c} g(x) = -\infty$				
$\lim_{x \rightarrow c} f(x) = -\infty$ $\lim_{x \rightarrow c} g(x) = +\infty$				
$\lim_{x \rightarrow c} f(x) = -\infty$ $\lim_{x \rightarrow c} g(x) = -\infty$				

$\frac{\mathfrak{N}}{\mathfrak{d}}$	$\mathfrak{d}\mathfrak{N}$	$\mathfrak{d} - \mathfrak{N}$	
0	0	$\mathfrak{d}-$	\mathfrak{d}
(*)	0	\mathfrak{N}	\mathfrak{N}
	$0 < \mathfrak{d} \mathfrak{N} \mathfrak{,} \infty +$		
	$0 > \mathfrak{d} \mathfrak{N} \mathfrak{,} \infty -$	$\infty +$	$\infty +$
$0 < \mathfrak{d} \mathfrak{N} \mathfrak{,} \infty -$	$0 < \mathfrak{d} \mathfrak{N} \mathfrak{,} \infty -$		
$0 > \mathfrak{d} \mathfrak{N} \mathfrak{,} \infty +$	$0 > \mathfrak{d} \mathfrak{N} \mathfrak{,} \infty +$	$\infty -$	$\infty -$
	$0 < \mathfrak{N} \mathfrak{N} \mathfrak{,} \infty +$		
0	$0 > \mathfrak{N} \mathfrak{N} \mathfrak{,} \infty -$	$\infty -$	$\infty +$
	$0 < \mathfrak{N} \mathfrak{N} \mathfrak{,} \infty -$		
0	$0 > \mathfrak{N} \mathfrak{N} \mathfrak{,} \infty +$	$\infty +$	$\infty -$
(**)	—	$\infty \pm$	$\infty \pm$
0	—	$\infty \mp$	$\infty \pm$
—	$\infty +$	—	$\infty +$
—	$\infty -$	$\infty +$	—
—	$\infty -$	$\infty -$	—
—	$\infty +$	—	$\infty -$

$$\left. \begin{array}{l} {}^+0 = (\mathfrak{x})\mathfrak{v}_{\mathfrak{N} \leftarrow \mathfrak{x}} \mathfrak{mil} \mathfrak{N} \mathfrak{,} \infty \pm \\ {}^-0 = (\mathfrak{x})\mathfrak{v}_{\mathfrak{N} \leftarrow \mathfrak{x}} \mathfrak{mil} \mathfrak{N} \mathfrak{,} \infty \mp \end{array} \right\} (**)$$

$$\left. \begin{array}{l} {}^+0 = (\mathfrak{x})\mathfrak{v}_{\mathfrak{N} \leftarrow \mathfrak{x}} \mathfrak{mil} \mathfrak{N} \mathfrak{,} \infty < \mathfrak{N} \\ {}^-0 = (\mathfrak{x})\mathfrak{v}_{\mathfrak{N} \leftarrow \mathfrak{x}} \mathfrak{mil} \mathfrak{N} \mathfrak{,} \infty > \mathfrak{N} \\ {}^-0 = (\mathfrak{x})\mathfrak{v}_{\mathfrak{N} \leftarrow \mathfrak{x}} \mathfrak{mil} \mathfrak{N} \mathfrak{,} \infty < \mathfrak{N} \\ {}^+0 = (\mathfrak{x})\mathfrak{v}_{\mathfrak{N} \leftarrow \mathfrak{x}} \mathfrak{mil} \mathfrak{N} \mathfrak{,} \infty > \mathfrak{N} \end{array} \right\} \mathfrak{N} \mathfrak{,} \infty \pm \left. \vphantom{\begin{array}{l} {}^+0 = (\mathfrak{x})\mathfrak{v}_{\mathfrak{N} \leftarrow \mathfrak{x}} \mathfrak{mil} \mathfrak{N} \mathfrak{,} \infty < \mathfrak{N} \\ {}^-0 = (\mathfrak{x})\mathfrak{v}_{\mathfrak{N} \leftarrow \mathfrak{x}} \mathfrak{mil} \mathfrak{N} \mathfrak{,} \infty > \mathfrak{N} \\ {}^-0 = (\mathfrak{x})\mathfrak{v}_{\mathfrak{N} \leftarrow \mathfrak{x}} \mathfrak{mil} \mathfrak{N} \mathfrak{,} \infty < \mathfrak{N} \\ {}^+0 = (\mathfrak{x})\mathfrak{v}_{\mathfrak{N} \leftarrow \mathfrak{x}} \mathfrak{mil} \mathfrak{N} \mathfrak{,} \infty > \mathfrak{N} \end{array}} \right\} \mathfrak{N} \mathfrak{,} \infty - (*)$$