

Exercices de limites

$$\lim_{x \rightarrow -1} \frac{x^2 - 1}{x + 1} = -2$$

$$\lim_{x \rightarrow 2} \frac{x^2 - 5x + 6}{x - 2} = -1$$

$$\lim_{x \rightarrow -2} \frac{x^3 + 8}{x + 2} = 12$$

$$\lim_{x \rightarrow -2} \frac{x^3 + 6x^2 + 11x + 6}{x + 2} = -1$$

$$\lim_{x \rightarrow 2} \frac{x^4 - 16}{x^2 - 4} = 8$$

$$\lim_{x \rightarrow +\infty} \frac{4x - 5x^3 + 4x^2}{1 - 3x + 7x^3} = -5/7$$

$$\lim_{x \rightarrow -\infty} \frac{(1 - 2x)(1 + 3x)}{(x - 2)(3x - 1)} = -2$$

$$\lim_{x \rightarrow -\infty} \sqrt{\frac{x^2 - x + 1}{1 + 4x^2}} = 1/2$$

$$\lim_{x \rightarrow -\infty} \frac{3x^3 + x^2 - 5}{1 - 4x^2} = +\infty$$

$$\lim_{x \rightarrow +\infty} \frac{x^2 - 2x + 2}{1 - 3x} = -\infty$$

$$\lim_{x \rightarrow 1} \frac{\sqrt{x+3} - 2}{x - 1} = 1/4$$

$$\lim_{x \rightarrow 2} \frac{\sqrt{x+2} - \sqrt{3x-2}}{x - 2} = -1/2$$

$$\lim_{x \rightarrow 1} \frac{2 - \sqrt{x+3}}{\sqrt{x-1}} = 0$$

$$\lim_{x \rightarrow 1} \frac{\sqrt{x} - 1}{x - 1} = 1/2$$

$$\lim_{x \rightarrow 0} \frac{x}{\sqrt{x^2 + 1} - 1} = \begin{matrix} +\infty \text{ à droite} \\ -\infty \text{ à gauche} \end{matrix}$$

$$\lim_{x \rightarrow -\infty} \frac{2x - 3}{\sqrt{x^2 + 5}} = -2$$

$$\lim_{x \rightarrow +\infty} \frac{\sqrt{3x^2 - 5x + 3}}{2x + 1} = \sqrt{3}/2$$

$$\lim_{x \rightarrow -\infty} \frac{3x^2 - 5x + 2}{\sqrt{2x^2 + 1}} = +\infty$$

$$\lim_{x \rightarrow -\infty} \frac{\sqrt{x^2 + 1}}{x + 1} = -1$$

$$\lim_{x \rightarrow \pm\infty} \sqrt{x^2 - x + 2} - \sqrt{x^2 + 5x - 3} = \begin{matrix} -3 \\ 3 \end{matrix}$$

$$\lim_{x \rightarrow \pm\infty} \sqrt{x^2 - 2x + 3} - x = \begin{matrix} -1 \\ +\infty \end{matrix}$$

$$\lim_{x \rightarrow \pm\infty} 2x - \sqrt{4x^2 + 5x - 1} = \begin{matrix} -5/4 \\ -\infty \end{matrix}$$

$$\lim_{x \rightarrow \pm\infty} \sqrt{x^2 + 1} - x + 1 = \begin{matrix} 1 \\ +\infty \end{matrix}$$

$$\lim_{x \rightarrow \pm\infty} \sqrt{x+1} - \sqrt{x} = \begin{matrix} 0 \\ \text{n'existe pas} \end{matrix}$$

$$\lim_{x \rightarrow \pm\infty} \sqrt{x^2 + 1} - \sqrt{x^2 - 1} = 0$$

$$\lim_{x \rightarrow \pm\infty} 4x - \sqrt{16x^2 - 12x} = \begin{matrix} 3/2 \\ -\infty \end{matrix}$$

$$\lim_{x \rightarrow \pm\infty} \sqrt{x^2 - x} - \sqrt{2x^2 - x} = -\infty$$

