

Limites - exercices

Exercice 1.

1. $\lim_{x \rightarrow +\infty} \frac{3x^3 - 2x + 1}{5x^3 + 4}$
2. $\lim_{x \rightarrow +\infty} e^{-x^2+1}$
3. $\lim_{x \rightarrow +\infty} \frac{\sin(x)}{x}$
4. $\lim_{x \rightarrow +\infty} \sqrt{x^2 + 3} - \sqrt{x^2 - 2}$

Exercice 2.

1. $\lim_{x \rightarrow +\infty} \frac{x^4 + \ln(x)}{e^x}$
2. $\lim_{x \rightarrow 0} \frac{e^x - 1}{x}$
3. $\lim_{x \rightarrow +\infty} \frac{\ln(x)}{x}$
4. $\lim_{x \rightarrow 0} \frac{\sqrt{x+1} - 1}{x}$

Exercice 3.

1. $\lim_{x \rightarrow -\infty} \frac{-2x^5 + x^2}{4x^5 - 3}$
2. $\lim_{x \rightarrow +\infty} \frac{(\ln(x))^2}{x^3}$
3. $\lim_{x \rightarrow 0} x \cos\left(\frac{1}{x}\right)$
4. $\lim_{x \rightarrow +\infty} \frac{\sqrt{x}}{\ln(x)}$

Exercice 4.

1. $\lim_{x \rightarrow +\infty} \frac{5x^{2/3} + x}{3x^{2/3} - 2x^2}$
2. $\lim_{x \rightarrow 0^+} \frac{5x^{2/3} + x}{3x^{2/3} - 2x^2}$
3. $\lim_{x \rightarrow +\infty} \frac{e^{2x} + x^3}{e^{2x} - 1}$
4. $\lim_{x \rightarrow +\infty} \frac{\cos(x)}{x^2}$