

CORRECTION

EXERCICE n°13 :

1. On a :

$$\left. \begin{array}{l} \lim_{x \rightarrow +\infty} (x^2) = +\infty \\ \lim_{x \rightarrow +\infty} (e^x) = +\infty \end{array} \right\} \Rightarrow \lim_{x \rightarrow +\infty} (x^2 + e^x) = +\infty .$$

2. On a :

$$\left. \begin{array}{l} \lim_{x \rightarrow -\infty} (-x) = +\infty \\ \lim_{x \rightarrow -\infty} (4e^x) = 0 \end{array} \right\} \Rightarrow \lim_{x \rightarrow -\infty} (-x + 4e^x) = +\infty .$$

3. On a :

$$\left. \begin{array}{l} \lim_{x \rightarrow +\infty} \left(\frac{1}{x}\right) = 0 \\ \lim_{x \rightarrow +\infty} (-3e^x) = -\infty \end{array} \right\} \Rightarrow \lim_{x \rightarrow +\infty} \left(\frac{1}{x} - 3e^x\right) = -\infty .$$

4. On a :

$$\left. \begin{array}{l} \lim_{x \rightarrow -\infty} (e + x) = -\infty \\ \lim_{x \rightarrow -\infty} (2 + e^x) = 2 \end{array} \right\} \Rightarrow \lim_{x \rightarrow -\infty} \left(\frac{e + x}{2 + e^x}\right) = -\infty .$$