

CORRECTION

EXERCICE n°23 :

a. On a :

$$\left. \begin{array}{l} \lim_{x \rightarrow +\infty} (-3x + 2) = \lim_{x \rightarrow +\infty} (-3x) = -\infty \\ \lim_{x \rightarrow -\infty} (e^x) = 0 \end{array} \right\} \Rightarrow \lim_{x \rightarrow +\infty} (e^{-3x+2}) = 0.$$

$$\left. \begin{array}{l} \lim_{x \rightarrow -\infty} (-3x + 2) = \lim_{x \rightarrow -\infty} (-3x) = +\infty \\ \lim_{x \rightarrow +\infty} (e^x) = +\infty \end{array} \right\} \Rightarrow \lim_{x \rightarrow -\infty} (e^{-3x+2}) = +\infty.$$

b. On a :

$$\left. \begin{array}{l} \lim_{x \rightarrow +\infty} \left(\frac{2}{x}\right) = 0 \\ \lim_{x \rightarrow 0} (e^x) = 1 \end{array} \right\} \Rightarrow \lim_{x \rightarrow +\infty} \left(e^{\frac{2}{x}}\right) = 1.$$

$$\left. \begin{array}{l} \lim_{x \rightarrow 0^+} \left(\frac{2}{x}\right) = +\infty \\ \lim_{x \rightarrow +\infty} (e^x) = +\infty \end{array} \right\} \Rightarrow \lim_{x \rightarrow 0^+} \left(e^{\frac{2}{x}}\right) = +\infty.$$