

# CORRECTION

## EXERCICE n°22 :

a. On a  $f(x) = -e^x - 3e^{\frac{x}{3}-1}$  alors :

$$f'(x) = -e^x - 3 \times \left(-\frac{1}{3}\right) e^{\frac{x}{3}-1} = -e^x + e^{\frac{x}{3}-1}.$$

b. On a  $f(x) = e^{\frac{x+1}{4}}$  alors :

$$f'(x) = \frac{1}{4} e^{\frac{x+1}{4}}.$$

c. On a  $f(x) = \frac{1}{e-1} e^{x-1}$  alors :

$$f'(x) = \frac{1}{e-1} e^{x-1}.$$

d. On a  $f(x) = \frac{e^{-x}-2}{e^x}$  alors :

$$f'(x) = \frac{-e^{-x} \times e^x - (e^{-x}-2)e^x}{(e^x)^2} = \frac{2(e^x-1)}{(e^x)^2}.$$