

# limites rencontrées au Bac 2019 (fonction exp)

$$\textcircled{1} \quad f(x) = \frac{7}{2} - \frac{1}{2}(e^x + e^{-x})$$

$$\textcircled{2} \quad f(x) = 3xe^{-\frac{1}{4}x} + 2$$

$$\textcircled{3} \quad f(x) = -\frac{1}{2}\left(e^x + \frac{1}{e^x}\right)$$

$$\textcircled{4} \quad f(x) = (x+1)e^{-\frac{1}{2}x}$$

(Indication)

$$f(x) = 2 \left( \frac{e^{\frac{1}{2}x}}{e^{\frac{1}{2}x}} \right) + e^{-\frac{1}{2}x}$$

$$\textcircled{5} f(x) = 4x - x \ln(x) \quad \text{sur } ]0; +\infty[$$

$$\textcircled{6} f(x) = \ln\left(\frac{3x+1}{x+1}\right) \quad \text{sur } ]-\frac{1}{3}; +\infty[$$

$$\textcircled{7} f(x) = x - \ln(x+1) \quad \text{sur } ]-1; +\infty[$$

$$\textcircled{8} f(x) = x(1 - \ln(x))^2 \quad \text{sur } ]0; +\infty[$$