

$$f(x) = (x+1)e^{-x}$$

$$f'(x) = (x+1)'e^{-x} + (x+1)(e^{-x})'$$

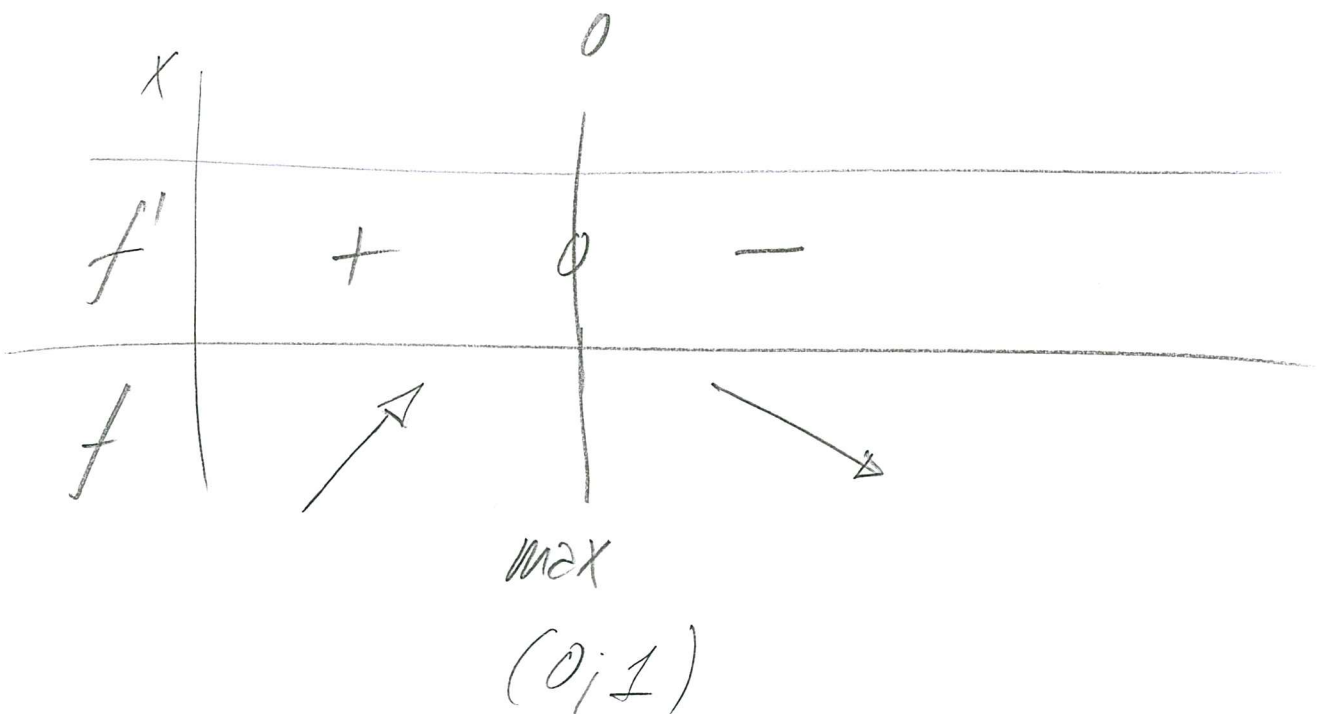
$$= 1 \cdot e^{-x} + (x+1)e^{-x} \cdot \underbrace{(-x)'}_{-1}$$

$$= e^{-x} - (x+1)e^{-x}$$

$$= e^{-x}(1 - (x+1)) = e^{-x}(1 - x - 1)$$

$$= -xe^{-x}$$

$$f'(x) = 0 \Leftrightarrow -xe^{-x} = 0 \Leftrightarrow x = 0$$



Il faut donc que $f(0) = g(0)$

$$1 = -e^0 + 2 = -1 + 2$$

$$\Rightarrow 2 = 2$$

On peut donc écrire

$$g(x) = -e^x + 2$$