

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

$$A(-2; 0) \quad B(0; 2)$$

$$\text{Si } A(x_A; y_A) \in \mathcal{C}_f \leadsto f(x)$$

$$\Rightarrow \boxed{y_A = f(x_A)}$$

$$A(-2; 0) \Rightarrow f(-2) = 0$$

$$B(0; 2) \Rightarrow f(0) = 2$$

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

$$\begin{aligned} f(-2) &= (a \times (-2) + b) e^{-(-2)} \\ &= (-2a + b) e^2 \end{aligned}$$

$$f(0) = (a \times 0 + b) e^0 = b$$

$$\rightarrow f(-2) = (-2a + b)e^2 = 0$$

$$f(0) = b = 2$$

$$(-2a + 2)e^2 = 0$$

$$-2a = -2$$

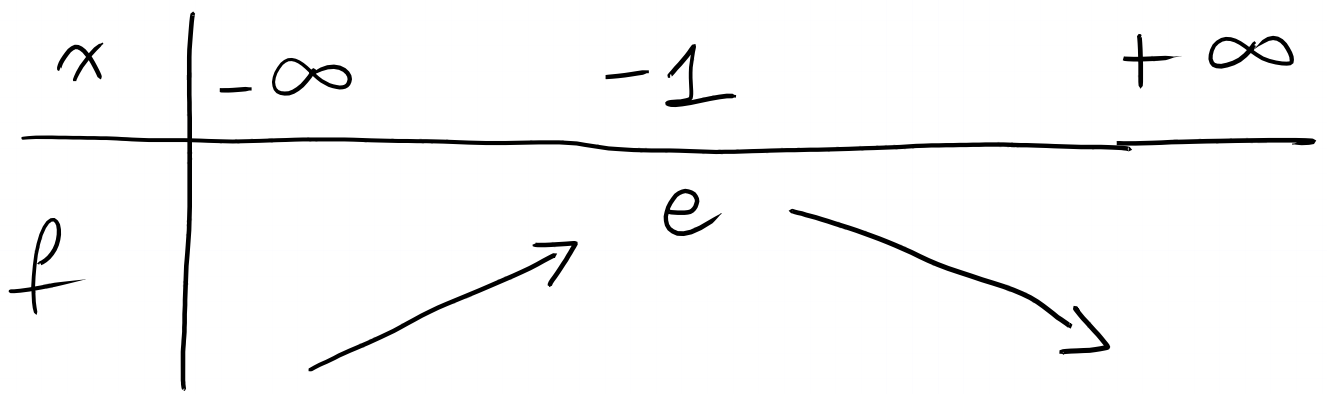
$$a = 1 \quad \text{et} \quad b = 2$$

$$f(x) = (x + 2)e^{-x}$$

$$C(-1; f(-1))$$

$$f(-1) = (-1 + 2)e^{-(-1)} =$$
$$= 1 \times e^1 = e$$

$$C(-1; e)$$



$$f(x) = (x+2) e^{-x} = u v$$

$$u = x+2 \quad v = e^{-x}$$

$$u' = 1 \quad v' = -e^{-x}$$

$$\begin{aligned} f'(x) &= u'v + uv' = \\ &= e^{-x} + (x+2)(-e^{-x}) = \\ &= e^{-x} - (x+2)e^{-x} = \\ &= e^{-x}(1 - (x+2)) = \\ &= e^{-x}(1 - x - 2) = e^{-x}(-x-1) \end{aligned}$$

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

$e^{-x} > 0$	$-x-1 > 0$
Toujours	$-x > 1$
	$x < -1$

x	$-\infty$	-1	$+\infty$
f'	+	0	-
f	$f(-1)$ <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">↖</div> <div style="text-align: center;">↘</div> </div>		

$$f(-1) = e$$