

1) NO HAY SUSTITUCIÓN QUE DE  
CONCIEGA

2) . . . . . FRACCIÓN  
PARCIAL QUE DE  
SOLUCIÓN

3) NO ES UNA INTEGRAL DIRECTA

4) UNA MULTIPLICACIÓN DE  
TERMINOS  $\int x \ln |x| dx$

$$\int \ln |x| dx \quad \int \arctan(x) dx \quad u = \ln |x| \quad dv = x dx$$

TEVED UNA FUNCIÓN FÁCIL DE DERIVAR,  
PERO DIFÍCIL DE INTEGRAR

$$\boxed{U = \ln |x| \quad \frac{\partial U}{\partial x} = \frac{1}{x}}$$

UNA VACA SIN GLA Y ESTIDA DE UNIFORME  
 $\downarrow$   $\downarrow$   $\downarrow$   $- \int v dv$

$$\boxed{UV - \int v dv}$$

$$\ln |x| \cdot x - \int x \cdot \frac{1}{x} dx = x \ln |x| - \int dx$$

$$= \boxed{x \ln |x| - x + C}$$

$$\int e^x \cdot \ln |x| dx = \int x^2 \cdot \ln |x| = \int x^2 \cdot \cos(x) dx$$

$$\int x^2 \cos(x) dx \quad \text{ILATE} \quad x^2 \quad (\cos(x))$$

$$U = x^2 / \frac{\partial U}{\partial x} = \cos(x) \quad \frac{\partial U}{\partial x} = \cos(x)$$

$$\partial U = 2x \quad V = \sin(x)$$

$$UV - \int v dv$$

$$\boxed{x^2 \sin(x) - \int \sin(x) \cdot 2x dx}$$

$$U = x^2 \quad \partial U = \sin(x) \quad \partial x \quad (\dots)$$

$$\partial U = 2x \quad V = -\cos(x)$$

$$UV - \int v dv$$

$$x^2 \sin(x) - (2x^2 \cdot \cos(x) - \int \cos(x) \cdot 2x dx)$$

$$x^2 \sin(x) + 2x^2 \cos(x) - \int 2x \cos(x) dx$$

$$x^2 \sin(x) + 2x^2 \cos(x) \quad U = 2x \quad \partial U = \cos(x) \quad \partial x$$

$$\partial U = 2 \quad V = \sin(x)$$

$$UV - \int v dv$$

$$x^2 \sin(x) + 2x^2 \cos(x) - (2x \cdot \sin(x) - \int \sin(x) \cdot 2 dx)$$

$$x^2 \sin(x) + 2x^2 \cos(x) - (2x \sin(x) - 2 \int \sin(x) dx)$$

$$\boxed{x^2 \sin(x) + 2x^2 \cos(x) - 2x \sin(x) - 2 \cos(x) + C}$$