República Bolivariana de Venezuela

Ministerios Para El Poder Popular Para La Educación

Universidad Politécnica Tecnológico Alonzo Gamero

Coro-Estado Falcón

Taller de matemáticas

Realizado por:

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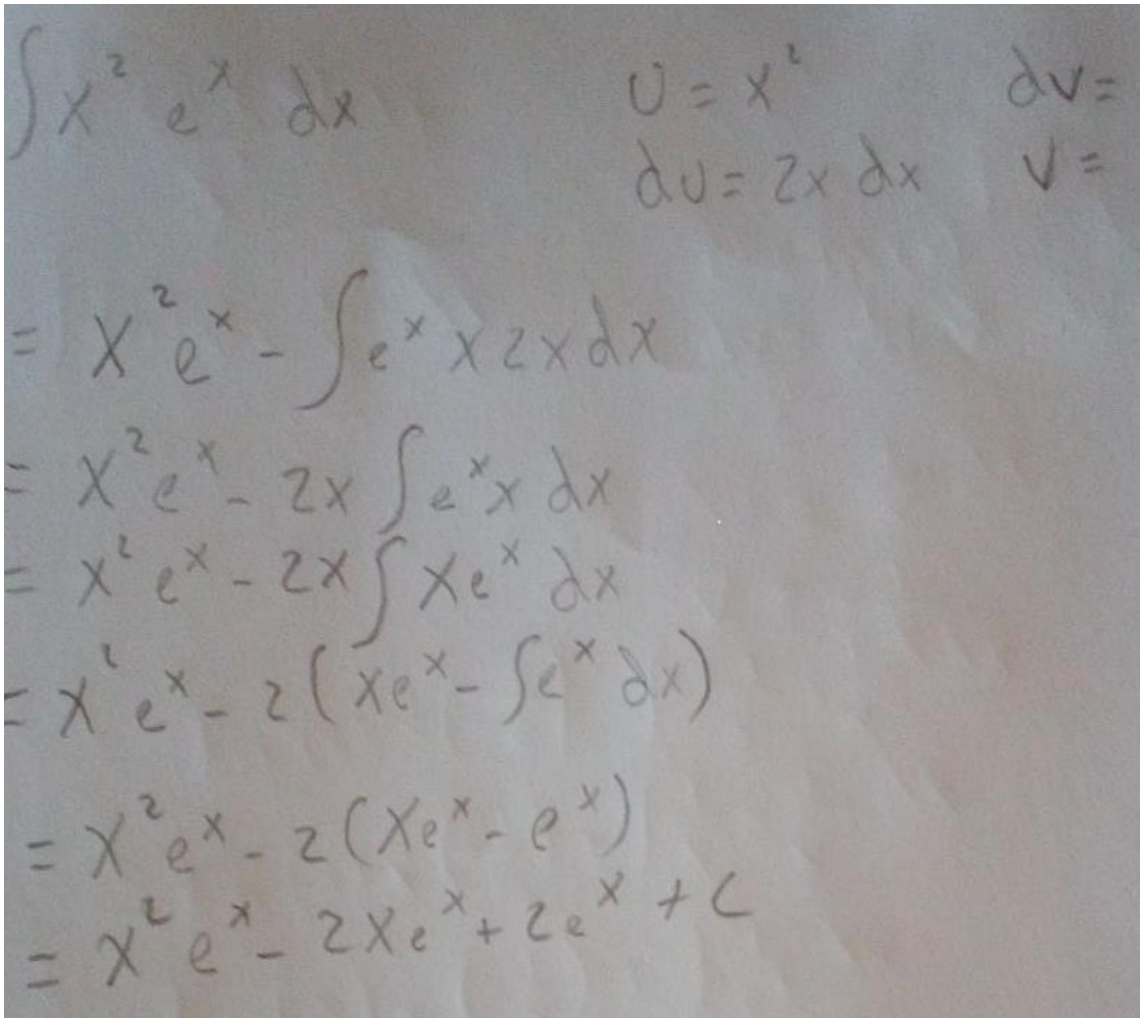
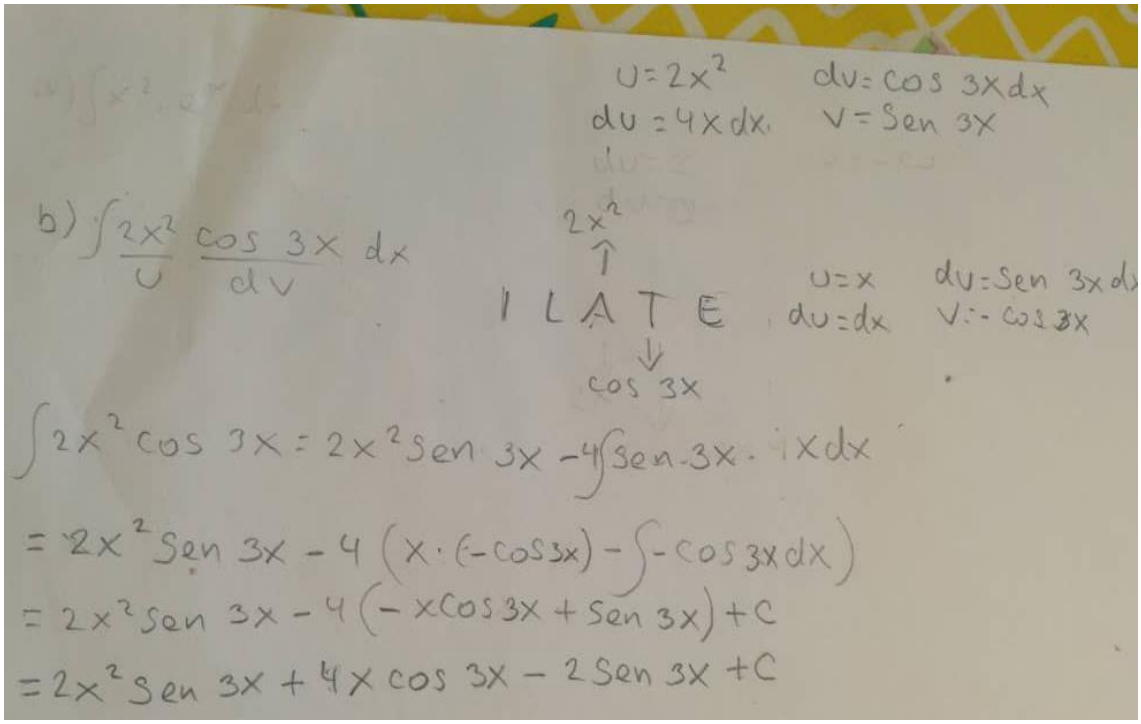
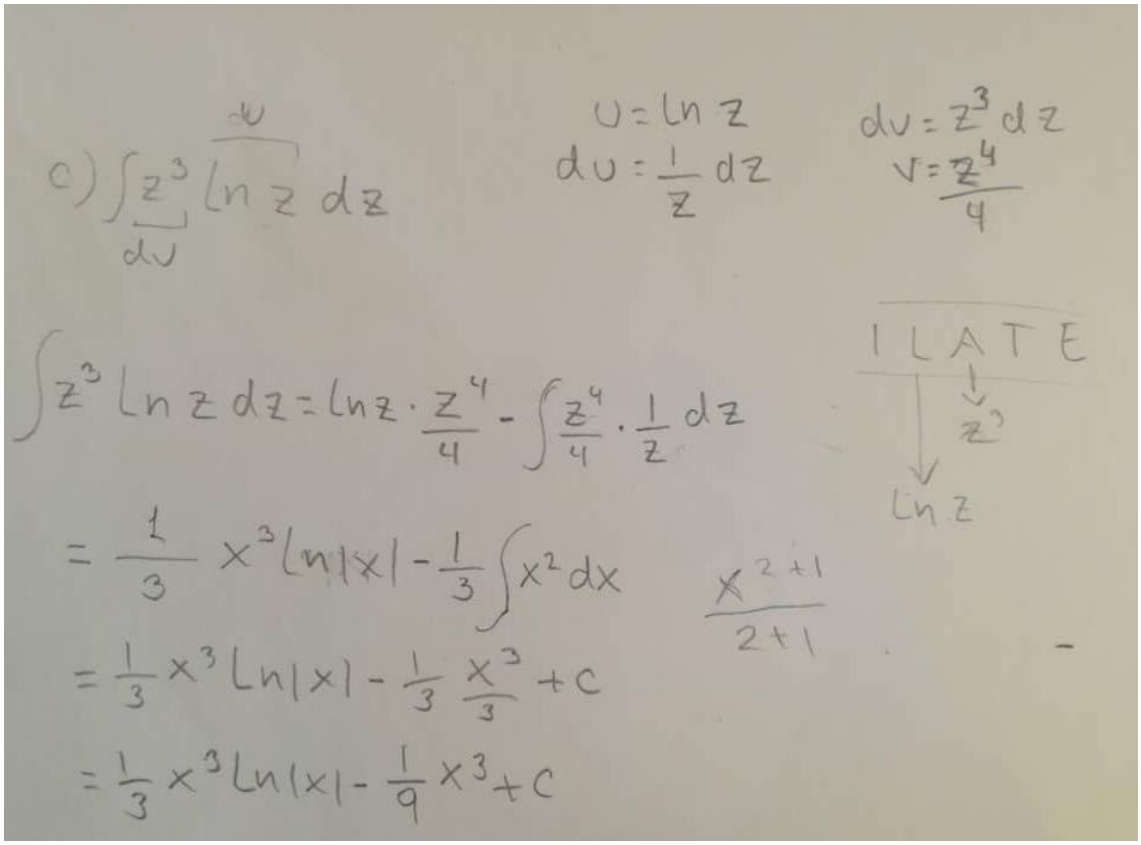
Santa Ana de Coro; 07 de marzo del 2023


$\int x^2 e^x dx$
$u = x^2$
$dv =$
$du = 2x\,dx$
$v =$
$= x^2 e^x - \int e^x \cdot x \cdot 2x\,dx$
$= x^2 e^x - 2x \int e^x x\,dx$
$= x^2 e^x - 2x \int x e^x dx$
$= x^2 e^x - 2(xe^x - \int e^x dx)$
$= x^2 e^x - 2(xe^x - e^x)$
$= x^2 e^x - 2xe^x + 2e^x + C$

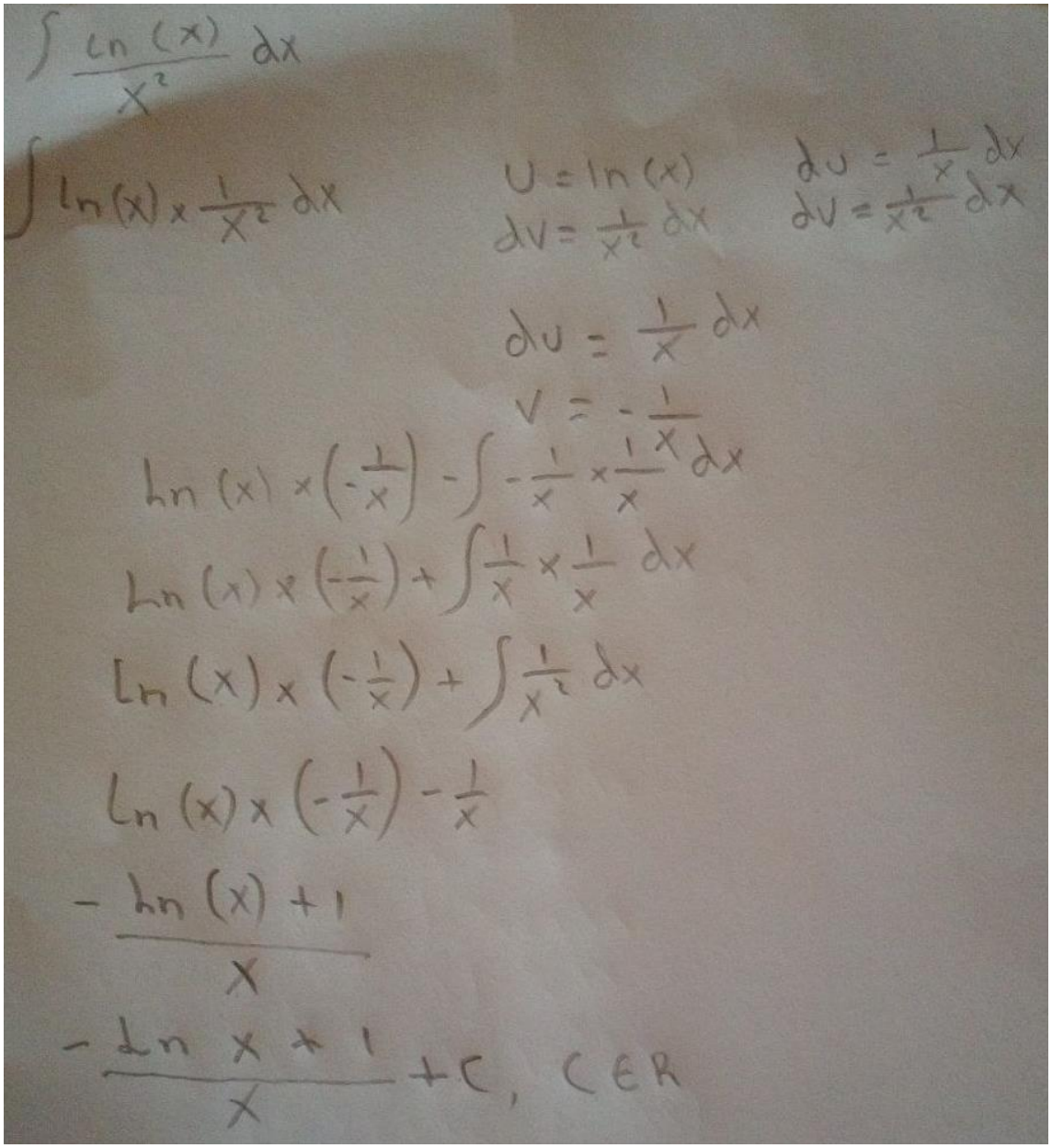
Ejercicio 1



Ejercicio 2



Ejercicio 3


$\int \frac{\ln(x)}{x^2} dx$
$\int \ln(x) \times \frac{1}{x^2} dx$
$u = \ln(x)$ $du = \frac{1}{x} dx$
$dv = \frac{1}{x^2} dx$ $dv = \frac{1}{x^2} dx$
$du = \frac{1}{x} dx$
$v = -\frac{1}{x}$
$\ln(x) \times \left(-\frac{1}{x}\right) - \int -\frac{1}{x} \times \frac{1}{x} dx$
$\ln(x) \times \left(-\frac{1}{x}\right) + \int \frac{1}{x} \times \frac{1}{x} dx$
$\ln(x) \times \left(-\frac{1}{x}\right) + \int \frac{1}{x^2} dx$
$\ln(x) \times \left(-\frac{1}{x}\right) - \frac{1}{x}$
$-\frac{\ln(x) + 1}{x}$
$-\frac{\ln x + 1}{x} + C, \; C \in R$

Ejercicio 4