Nombre de alumnos: Sili Morelia Pérez Escobedo

Nombre del profesor: Jorge Enrique Albores Aguilar

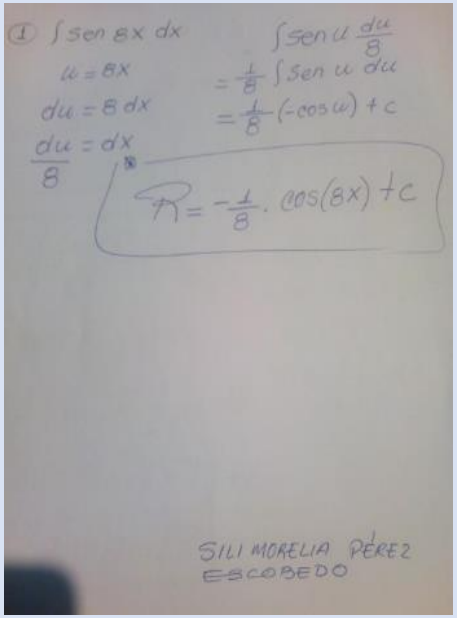
Nombre del trabajo: Integrales2

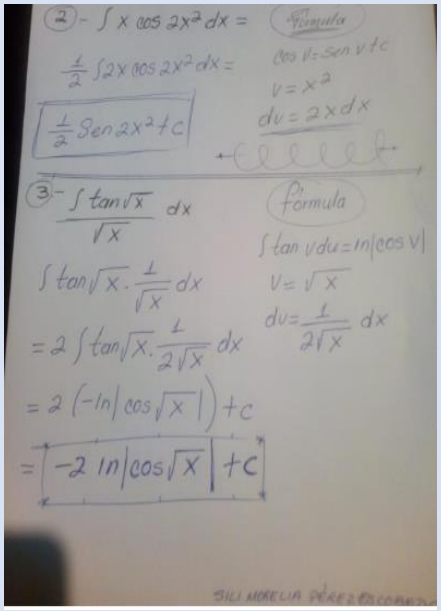
Materia: Matemáticas aplicada

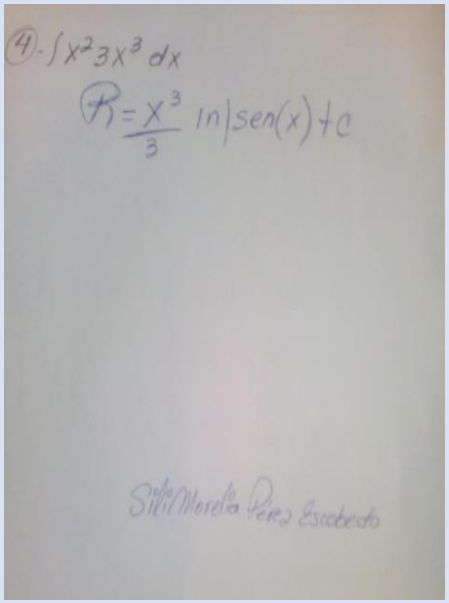
Grado: 6to cuatrimestre

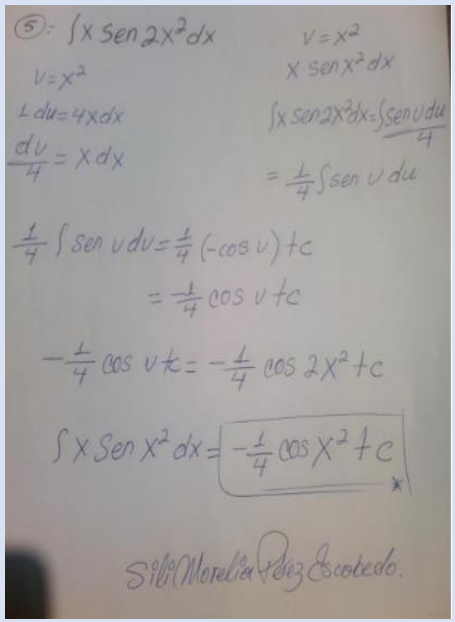
Grupo: "A"

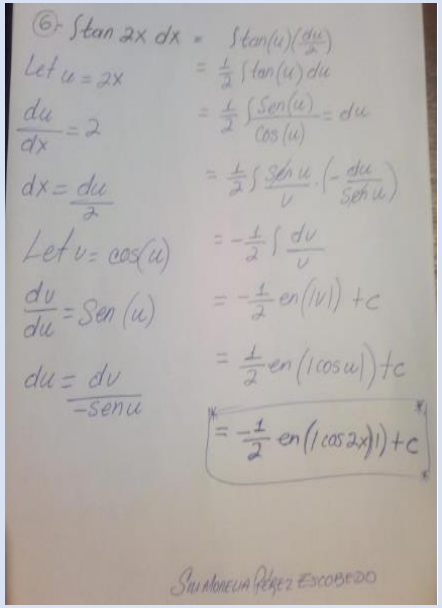
Comitán de Domínguez Chiapas a 10 de junio de 2022.

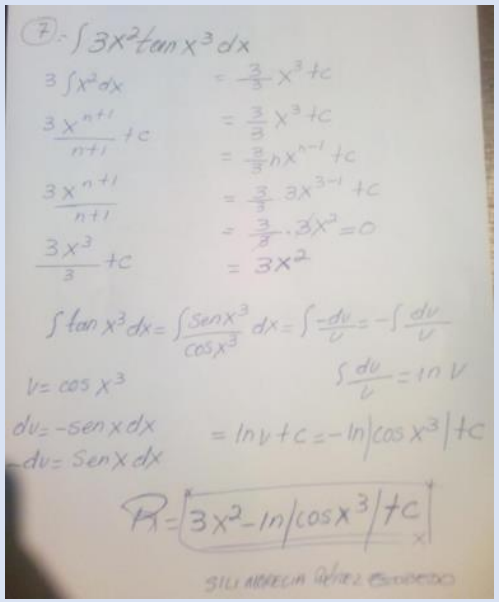

① ∫ sen 8x dx
u = 8x
du = 8 dx
du/8 = dx
∫ sen u du/8
= 1/8 ∫ sen u du
= 1/8 (-cos u) + c
R = -1/8 . cos(8x) + c
SILI MORELIA PÉREZ ESCOBEDO

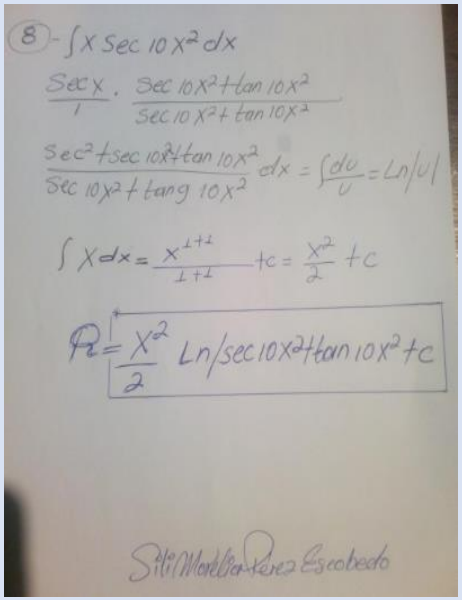

② - ∫ x cos 2x² dx =
Formula
cos v = sen v + c
1/2 ∫ 2x cos 2x² dx =
v = x²
dv = 2x dx
1/2 Sen 2x² + c
③ - ∫ tan √x / √x dx
formula
∫ tan v dv = ln|cos v|
∫ tan √x . 1/√x dx
v = √x
dv = 1/2√x dx
= 2 ∫ tan √x . 1/2√x dx
= 2 (-ln|cos √x|) + c
= -2 ln|cos √x| + c


④ - ∫ x² 3x³ dx
R = x³/3 ln|sen(x)| + c
Sili Morelia Perez Escobedo


⑤ - ∫ x sen 2x² dx
v = x²
v = x²
dv = 4x dx
dv/4 = x dx
x sen x² dx
∫ x sen 2x² dx = ∫ sen v dv/4
= 1/4 ∫ sen v dv
1/4 ∫ sen v dv = 1/4 (-cos v) + c
= 1/4 cos v + c
-1/4 cos v + c = -1/4 cos 2x² + c
∫ x Sen x² dx = -1/4 cos x² + c
Sili Morelia Perez Escobedo.


⑥ - ∫ tan 2x dx = ∫ tan(u)(du/2)
Let u = 2x
= 1/2 ∫ tan(u) du
du/dx = 2
= 1/2 ∫ Sen(u)/Cos(u) = du
dx = du/2
= 1/2 ∫ sen u/v . (-du/sen u)
Let v = cos(u)
= -1/2 ∫ dv/v
dv/du = Sen(u)
= -1/2 en(|v|) + c
du = dv/-sen u
= 1/2 en(|cos u|) + c
= -1/2 en(|cos 2x|) + c
Sili Morelia Pérez Escobedo


⑦ - ∫ 3x² tan x³ dx
3 ∫ x² dx = 3/3 x³ + c
3 x^(n+1)/(n+1) + c = 3/3 x³ + c
3 x^(n+1)/(n+1) = 3/3 n x^(n-1) + c
3x³/3 + c = 3/3 . 3x³⁻¹ + c
= 3/3 . 3x² = 0
= 3x²
∫ tan x³ dx = ∫ Sen x³/cos x³ dx = ∫ -dv/v = -∫ dv/v
v = cos x³
∫ dv/v = ln v
dv = -sen x dx
-dv = Sen x dx
= ln v + c = -ln|cos x³| + c
R = 3x² - ln|cos x³| + c
Sili Morelia Pérez Escobedo


⑧ - ∫ x Sec 10x² dx
Sec x / 1 . Sec 10x² + tan 10x² / Sec 10x² + tan 10x²
Sec² + sec 10x² tan 10x² / Sec 10x² + tang 10x² dx = ∫ dv/v = Ln|v|
∫ x dx = x^(1+1)/(1+1) + c = x²/2 + c
R = x²/2 Ln|sec 10x² + tan 10x²| + c
Sili Morelia Perez Escobedo