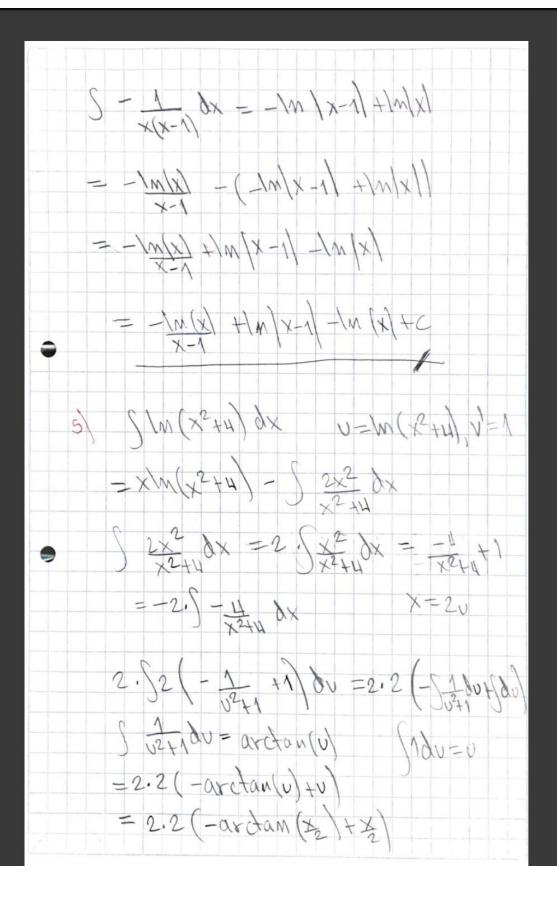
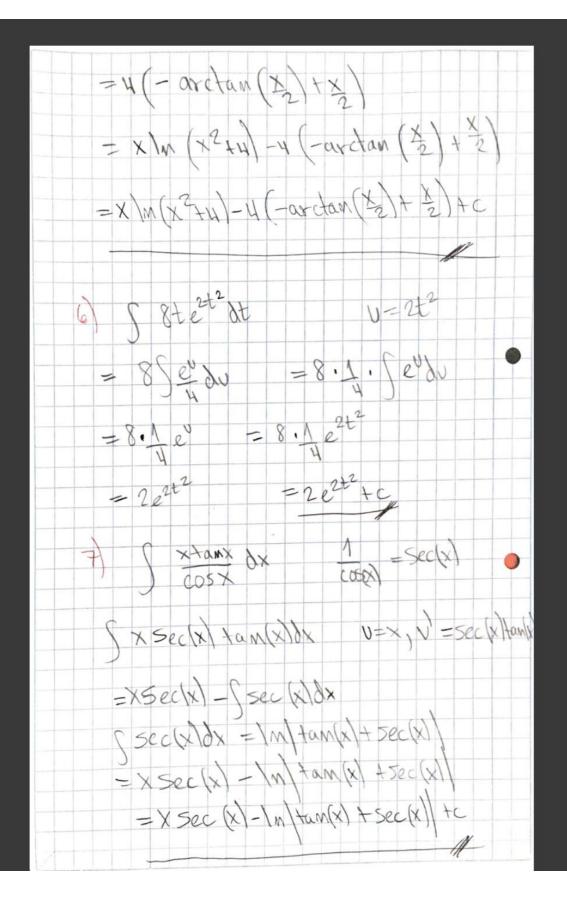
Universidad del Valle de Guatemala Curso: Cálculo 1 Sección: 20,21

Nombre: Fernando José Garavito Ovando Carné: 18071 Nombre: Juan Fernando Meléndez Carné: 18127 Nombre: Fernando de León Carné: 19713

## Trabajo Guiado No. 4

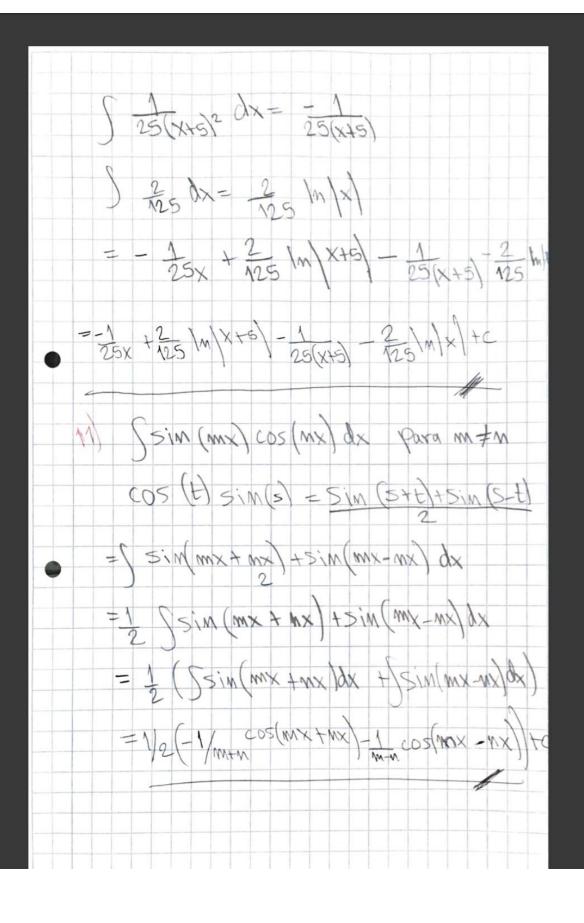
 $\int \frac{dx}{\sqrt{x}+a}$ U = 1x +9  $=\int_{0}^{\infty} 2\left( v-q\right) dv$  $=2\left( v-9\right) dv$ U-9: 1-9  $=251-\frac{9}{9}dv = 2(51dv-69)dv$ 1 dv = 0  $\int \frac{9}{10} dv = 9 |m| v | v = 5 \times 4$ = 2 (5x +9-9/m/ 5x+9) = 2 (5x+9-9/N/5x+9/)+C  $\frac{2}{\sqrt{2}} \int e^{\sqrt{2}x+1} dx \qquad v = \sqrt{2}x+1$ = \( \ell\_{\text{v}} \cdot \) = 2. \( \ell\_{\text{v}} \d \text{v} \) \( \text{V=U}, \) = 2 (ev v - Sevar) (e'dv=e'  $= 2(e^{\sqrt{2}}) = 2(e^{\sqrt{2}}) + 2(e^{\sqrt{2}})$   $= 2(e^{\sqrt{2}}) + 2(e^{\sqrt{2}}) + 2(e^{\sqrt{2}})$  3)  $\int \frac{3x-1}{x(x^2-4)} dx$   $\frac{3x-1}{x(x^2-4)} \cdot \frac{1}{4x} \cdot \frac{7}{8(x+2)} \cdot \frac{5}{8(x+2)}$  $= \int \frac{1}{4x} - \frac{7}{8(x+2)} + \frac{5}{8(x-2)} dx$  $= \int \frac{1}{4x} dx - \int \frac{1}{8(x+2)} dx + \int \frac{5}{8(x+2)} dx$  $\frac{1}{4} dx = \frac{1}{4} \int \frac{1}{4} dx = \frac{1}{4} |m| \times |m$  $\frac{5}{8(x-2)}dx = \frac{5}{8}m(x-2)$ 1 m/x = 7 m/x +2 +5 m/x -2) = 1 /m/x/-7/m/x+2/+5/m/x2/+c 5 (x-1/2 0x U= /m/x), V= 1 = $\frac{x-1}{x}$ 

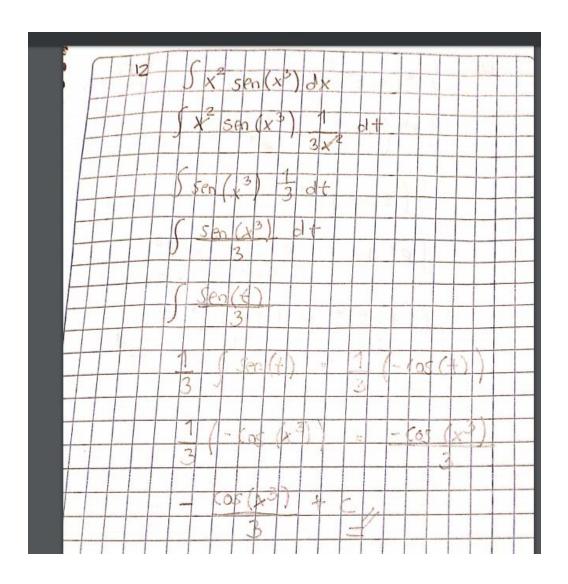




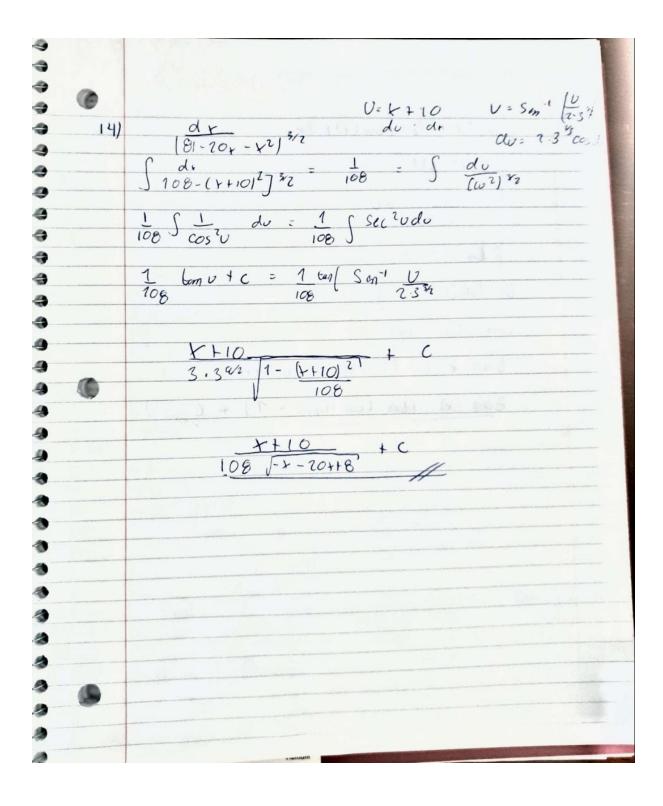
8) S +5 At 2 t +t 12+1  $= \int t^3 - t + \frac{t}{t^2 + 1} dt$ = St3dt-Stdt + St dt 5 t3 dt = +3+1 = +4  $\begin{cases} t dt = t^{1} + 1 = t^{2} \\ 1 + 1 = t^{2} \end{cases}$ S + 2 + 1 = 1 |m| + 2 + 1 |V = + 2 + 1 $= \int \frac{1}{2} dv = \frac{1}{2} \cdot \int \frac{1}{2} dv$  $=\frac{1}{2}|m|v|=\frac{1}{2}|m|t^2+1$ = ±4 - ±2 + 1 /m +2+1  $=\frac{t^{4}-t^{2}}{4}+\frac{1}{2}|m|t^{2}+1|+c$ a) Stantoxsec4xdx

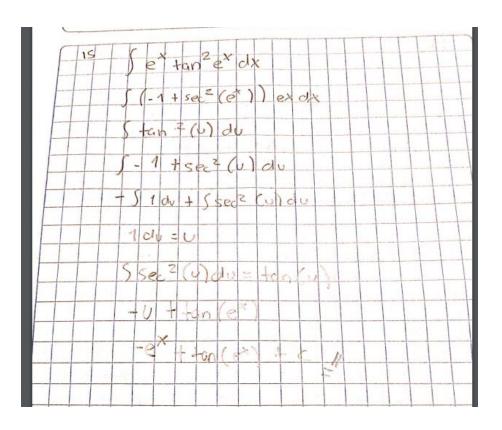
= ( sec2 (x) sec2 (x) +an10 (x) dx = 5 (1+ tan2 (x)) sec2 (x) tam10 (x)dx = 000 (1+02/gn = 100+012gn = tan |x | + tan 13 |x |  $= + \frac{1}{11} \frac{(x)}{x} + \frac{1}{13} \frac{(x)}{x} + c$  $\frac{1}{25}$   $\times 2 + \frac{2}{25}$   $\times 15$   $\times 15$ 

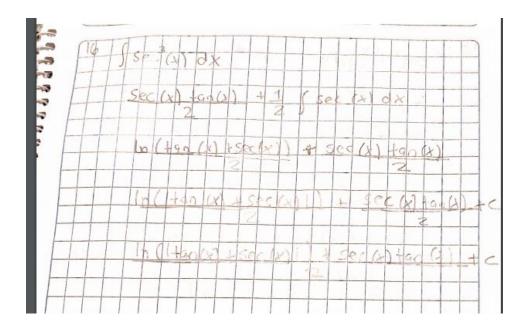


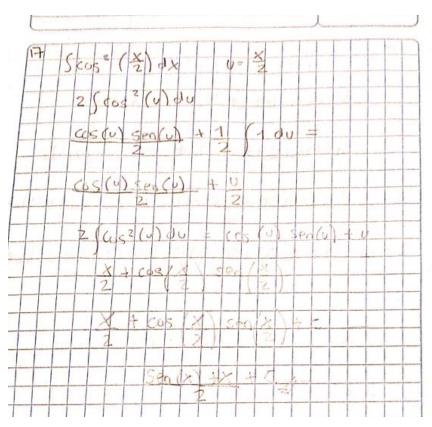


| 13 |    | 54  | 0(1 | teu  | S   | du |     |       |   | 7 |   |   | A |
|----|----|-----|-----|------|-----|----|-----|-------|---|---|---|---|---|
|    |    | 500 | 6   | 11-0 | w W | 5  | 1   | LAF   | d | p |   |   |   |
|    |    | 51  | 1+  | ew   | 5   | de |     |       |   |   |   |   |   |
|    |    | JP. | 9   | P    |     | P  | 9+  | 4 8 1 |   | * | P | 6 |   |
|    | 14 | 1+  | ew  | 4    | *   | (  | 100 | 10    | 6 | 6 | 4 | - |   |









| 7  | 18        | ) 1+ seg(x)   |
|----|-----------|---|
| -  |           | Ser(x) = - 1<br>1+Sen(x) 1+Sen(x) + 1                 |
|    |           | Sen (A) - (1 + sen (A)) + 1                           |
|    |           | Sen (x) - (1 + sen (x)) = -1<br>1+ sen (x) 1+ sen (x) |
| 50 | 400       | (1+sen(x)) = (sen(x) - (1+sen(x))<br>+sen(x)          |
| 5  | -1        | 500 (A) + 1 dx + 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  |
|    | 17+       | ax = - 2  |
|    | 2.        | 1 au - 2 · (Acin (3) +1) -2+1                         |
| -  | 12<br>tan | 4+6   |

| 19 | 5 12 4G dx                               |
|----|--|
|    | Jx2+9 - 5 - 1 dx                         |
|    | 5-1 dx = - In 3 (x + Jq + x 2            |
|    | 5-1-04                                   |
|    | -In Itan (acción (13x)) + SPE (nota (3x) |
|    | -h 1 3 (x + 1 9 + x 2 )                  |
|    | -1×2+4 - (-10) 1 (x + V 9 + x2)          |
|    | - 1x2 + 9 + 13 x + J = x = 1 + c         |

20) Sec2 (+1 la (tan(+)) dr U= tan (+1 d+ = 1 dv Sec2 (+) flo (v) dv U ln (U) - fidu tem in them - v tan x in (tan (x)) - tan (x) tan (4) (In Item 1411) - 1) + C

| 21 - 5 | sen (2x) e senx dx   |
|--------|--|
|        | Sen (2X) = 2 son x cos x U= San x<br>2 Sen x cos x e son x dx du = koxxolx |
|        | 2) yeu au weu av ey  |
|        | 2(we - sed = )   |
|        | 2 Sen X 2501X - 2 2 501X   |

| 9    |     |  |
|------|-----|--|
| -    |     |  |
| -    | -   |  |
| *    | 4   |  |
| 0    | 221 | $\int \frac{1}{x^{4+1}} dx$  |
| 9    |     | 7 441  |
| ***  |     |  |
| 9    |     | x2- V2x +1) (x2+ V2x +1  |
| 4    |     | X - NSX +1) (X + N SX + 1  |
| -9   |     | C 2152 152 15  |
| -9   |     | 5 x+v2<br>7 2 (x2+v2x+1) 2 2 (x2-v2+ +1) dt  |
| 3    |     | ( ( ( ( ) ) )  |
| -    |     | [(2++ \sqrt{2})  |
|      |     | S (2 x + 52 ) + ( \( \sigma 2 \( \frac{1}{2} + \sigma 2 \) dx  |
| 4    |     |  |
| 9    |     | 1 52++52 dx 1 5 +2+52 ++1  |
| 4    | -   | 2 ] x2+ \(\int \text{2} + \text{1} \)  |
| *    | 4   | 11 2.5   |
| -    |     | $U = \frac{1}{2 + \sqrt{2}} + \frac{1}{4} $ $dv = \frac{1}{2 + \sqrt{2}} $ $dv = \frac{1}{4} $ |
| -    |     | dy = 1 du J  |
| -    |     |  |
| -    |     | Ln (x2+V2x+1) = 5 x2+V2x+1   |
| -    |     |  |
| -0   |     | J(x + 4) + 1 U= V2++1  |
| -0   |     | 1 (x + 4) + 2 U= V2++1  d+= 1 du   |
| **** |     | V  |
| -0   |     |  |
| -    |     | Ln (v2+ V2++1) - Ln (x2-V2++1) + tan' (J2++1)  |
| 4    |     | 2 5/2 2 2 2 2  |
| - 4  |     | + +m" (V2x-1) . (  |
| - 0  |     | t tom (12x-1) + C  |
| 20   |     |  |
| 20   |     |  |
| 20   |     |  |
|      |     |  |