A day in the life of

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Nombre del tema : Analisis grafico de las funciones

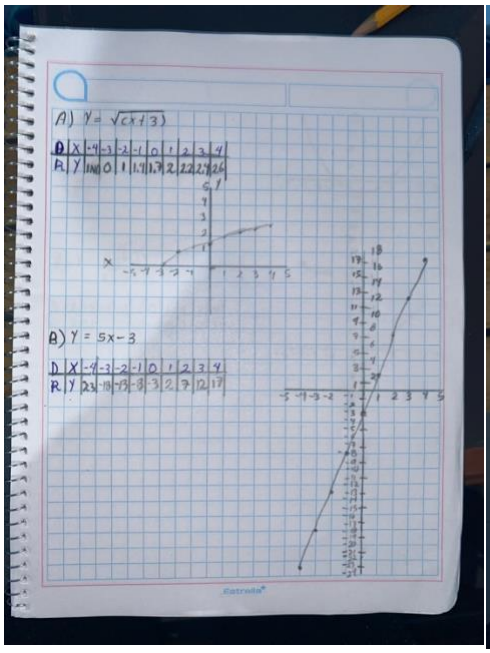
Parcial I

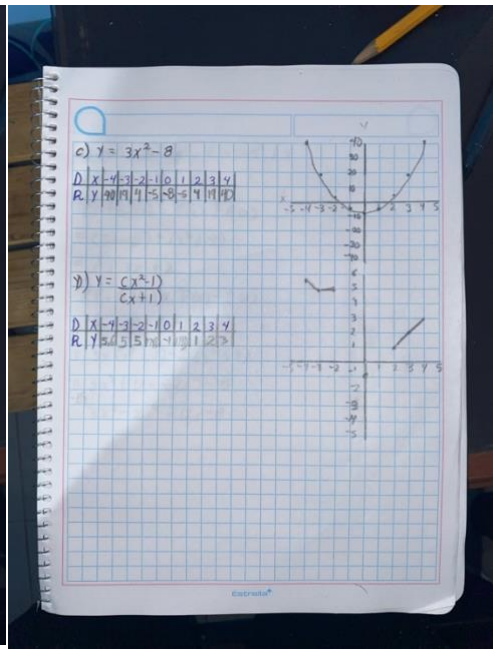
Nombre de la materia : Cálculo

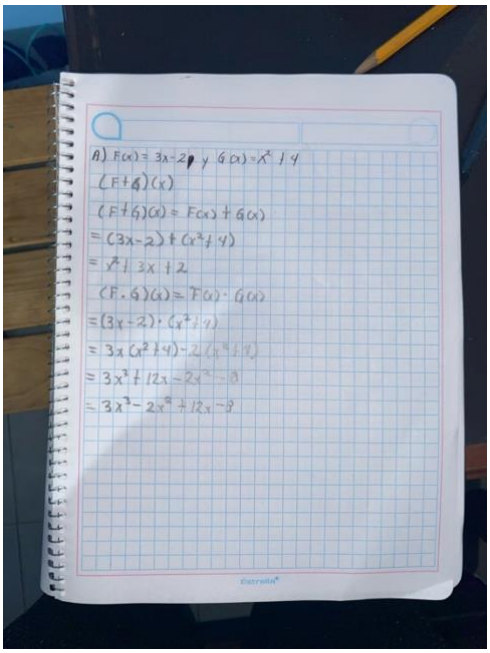
Nombre del docente : Juan José ojeda Trujillo

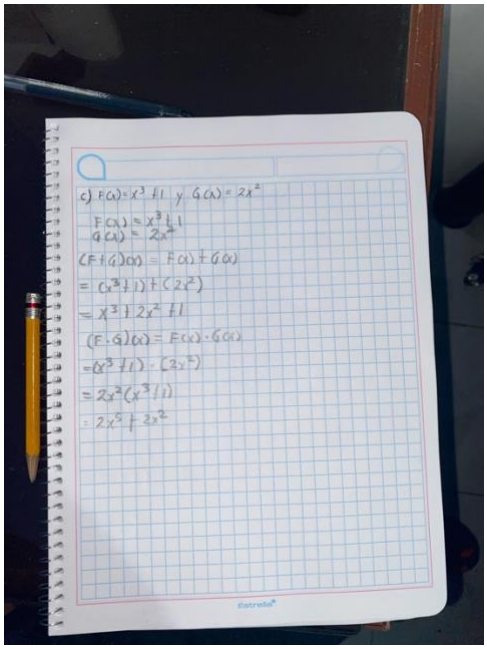
Nombre de la carrera : Técnico En enfermería general

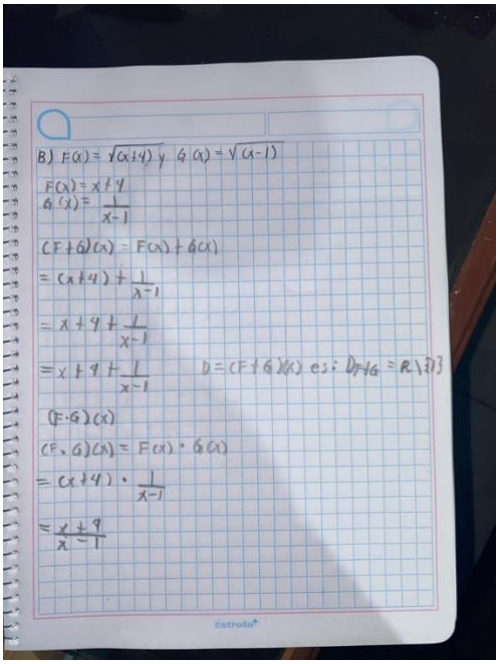
Semestre IV

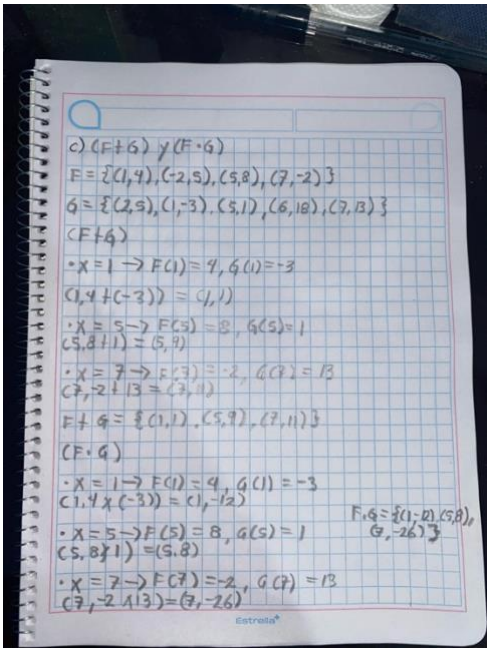

A) $y = \sqrt{(x+3)}$
B) $y = 5x - 3$

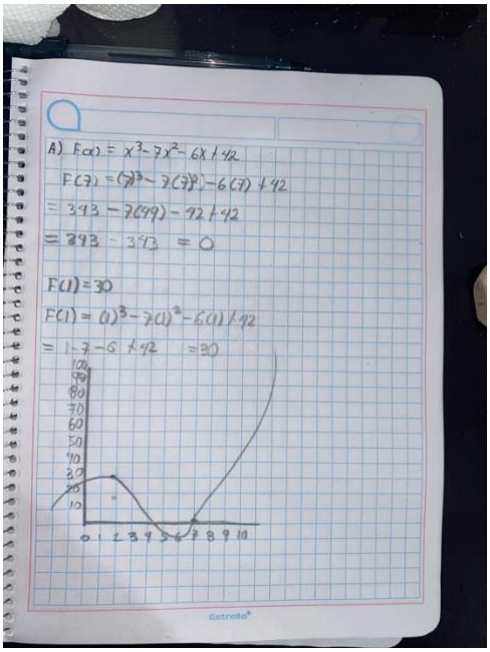

c) $y = 3x^2 - 8$
b) $y = \frac{(x^2-1)}{(x+1)}$


A) $F(x) = 3x-2$ y $G(x) = x^2 + 4$
$(F+G)(x)$
$(F+G)(x) = F(x) + G(x)$
$= (3x-2) + (x^2+4)$
$= x^2 + 3x + 2$
$(F \cdot G)(x) = F(x) \cdot G(x)$
$= (3x-2) \cdot (x^2+4)$
$= 3x(x^2+4) - 2(x^2+4)$
$= 3x^3 + 12x - 2x^2 - 8$
$= 3x^3 - 2x^2 + 12x - 8$


c) $F(x) = x^3 + 1$ y $G(x) = 2x^2$
$F(x) = x^3 + 1$
$G(x) = 2x^2$
$(F+G)(x) = F(x) + G(x)$
$= (x^3+1) + (2x^2)$
$= x^3 + 2x^2 + 1$
$(F \cdot G)(x) = F(x) \cdot G(x)$
$= (x^3+1) \cdot (2x^2)$
$= 2x^2(x^3+1)$
$= 2x^5 + 2x^2$


B) $F(x) = \sqrt{(x+4)}$ y $G(x) = \sqrt{(x-1)}$
$F(x) = x + 4$
$G(x) = \frac{1}{x-1}$
$(F+G)(x) = F(x) + G(x)$
$= (x+4) + \frac{1}{x-1}$
$= x + 4 + \frac{1}{x-1}$
$= x + 4 + \frac{1}{x-1}$
$D = (F+G)(x)$ es: $D_{F+G} = R \setminus \{1\}$
$(F \cdot G)(x)$
$(F \cdot G)(x) = F(x) \cdot G(x)$
$= (x+4) \cdot \frac{1}{x-1}$
$= \frac{x+4}{x-1}$


c) (F+G) y (F·G)
F = {(1,4),(-2,5),(5,8),(7,-2)}
G = {(2,5),(1,-3),(5,1),(6,18),(7,13)}
(F+G)
• X = 1 → F(1) = 4, G(1) = -3
(1,4+(-3)) = (1,1)
• X = 5 → F(5) = 8, G(5) = 1
(5,8+1) = (5,9)
• X = 7 → F(7) = -2, G(7) = 13
(7,-2+13) = (7,11)
F+G = {(1,1),(5,9),(7,11)}
(F·G)
• X = 1 → F(1) = 4, G(1) = -3
(1,4x(-3)) = (1,-12)
• X = 5 → F(5) = 8, G(5) = 1
(5,8x1) = (5,8)
• X = 7 → F(7) = -2, G(7) = 13
(7,-2x13) = (7,-26)
F·G = {(1,-12),(5,8),(7,-26)}


A) F(x) = x³ - 7x² - 6x + 42
F(7) = (7)³ - 7(7)² - 6(7) + 42
= 343 - 7(49) - 42 + 42
= 343 - 343 = 0
F(1) = 30
F(1) = (1)³ - 7(1)² - 6(1) + 42
= 1 - 7 - 6 + 42 = 30
100
90
80
70
60
50
40
30
20
10
0 1 2 3 4 5 6 7 8 9 10