UNIVERSIDAD DEL SURESTE

Campus Comitán

Licenciatura de Medicina Humana

TEMA: ¡A derivar se ha dicho!

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SEMESTRE: 2° **GRUPO:** C

MATERIA: Biomatemáticas

DOCENTE: Rosvani Margine Morales Irecta

Ejercicio

$x^3 \rightarrow 3x^2$
$x^2 \rightarrow 2x$
$x^8 \rightarrow 8x^7$
$x^{11} \rightarrow 11x^{10}$
$x^{20} \rightarrow 20x^{19}$

$y = 1$
siempre

$F(x) = 3x^5 \rightarrow 3(5x^4)$

$F(x) = 15x^4 \rightarrow 15(4x^3)$

Ejercicios 1

$4x^3 \rightarrow 12x^2$
$5x^6 \rightarrow 30x^5$
$2x \rightarrow 2$
$3x^3 \rightarrow 9x^2$ $\quad 3(3x^2) = 9x^2$
$8x^2 \rightarrow 16x$ $\quad 8(2x) = 16x$

15-MAY-22.

4. $A(x) = F \pm g$

$F(x) = (F \pm g)' = F' \pm g'$

$F(x) = 2x^3 + x$

$F'(x) = 2(3x^2) + 1$

$Fx = 6x^2 + 1$

Ejercicios:

1) $2x^2 + 3x$

$F(x) = 2(2x) + 3x$

$R = 4x + 3$

2) $6x - 2x^3$

$6 - 2$

$R = 6$

3) $5x^5 + x^2$

$5(5x^4) + 2x$

$R = 25x^4 + 2x$

4) $7x^2 + x$

$7(2x) + 1$

$R = 14x + 1$

5) $9x^3 - 4x$

$9(3x^2) - 4x$

$R = 27x^2 - 4$

S: $F(x) = f + g$

$F'(x) = (fg)' = fg' + fg'$

$F(x) = (4x+1) + (10x^2 - 5) =$

$F(x) = 20x(4x+1) + 4(10x^2 - 5)$

Ejercicio.

1. $(4x^3 - 2) - (6x^2 + 2)$

$12x^2(4x^3 - 2) - 12x^2(6x^2 + 2)$

2. $(3x^5 + 5x) + (7x - 3)$

$F(x) = 7(3x^5 + 5x) + 15x^4(7x - 3)$

3. $(5x^2 - 6) + (8x^3 + 4)$

$F(x) = 24x^2(5x^2 - 6) + 10x(8x^3 + 4)$

4. $(2x^5 - 3x) - (6x - 1)$

$F(x) = 6(2x^5 - 3x) - 10(6x - 1)$

$(7x^3 + 7) + (7x^3 - 7)$

$7x^3 + 7) + 21x^2(7x^3 - 7)$

18/03/22.

6. $f(x)\left[\frac{f}{g}\right]$ $f'(x)$ $\frac{F'g - fg'}{g^2}$ Formula.

$f(x) = \frac{4x-5}{5x^2+3x} =$

R=

$$\frac{[10x+3\ (4x-5) - [4\ (5x^2+3x)]}{(5x^2+3x)^2}$$

(Ejercicios):

1. $\frac{6x^3+4}{2x^2+3x}$

$$\frac{4x+3\ (6x^3+4) - [18x^2(2x^2+3x)}{(2x^2+3x)^2}$$

2. $\frac{5x^5-2x^4}{3x^3-x^2} = \frac{9x^2-2x(5x^5-2x^4) - [25x^4(8x^3-x^2)}{(3x^3-x)^2}$

3. $\frac{4x^4+3x^3}{2x^2+x} = \frac{[4x+1(4x^4+3x^3) - [16(2x^2+1}{(2x+1)^2}$

4. $\frac{8x^2-3}{7x} = \frac{7x(8x^2-3) - [16x(7x)}{(7x)^2}$

5. $\frac{x^7}{2x^3} = \frac{6x^2(x^7) - 7x^6(2x^3)}{(2x^3)^2}$

5) $\frac{x^7}{2x^3}$

8/Mar/22.

Ejercicios:

1) $3x^2 = 6x = f'(x) = f'(x) = 6x$

$f = f(x) = (x)$

2) $f(x) = 5 = 0$ formula $= f(x) = f(x) = 0$

$f = f(x) = 0$ $f(x) = \emptyset$

3) $-2x = -2$ $f(x) = 2$ $f(x) = f(x) = -2$

4) $f(x) = -2x^2 - 5 = f'(x) = f'x = -4x$

$f = f(x) = f \pm 5$, $f'(x) = (f \pm 0)$

5) $f(x) = 2x^4 + x^3 - x^2 - 4 = 8x^3 + 3x^2 - 2 - 4$

formula: $f(x) = (x)$

$f'(x) = (f(x) = (f(x)$

6) $f(x)$ $4x^3 - 6x = 12x^2 - 6x =$

$f = f(x) = f \pm 5 = f(x) = (f = (x)$

8) $8 = 0$ = formula $= f(x) = 0$

$f = f(x) = 0$ $f(x) = \emptyset$

9) $(3x^3 + 2x) + (6x^4 + 6)$

$R = 24x^3(3x^3 + 2x) + 9x^2(6x^4 + 6)$

$f = f(x) = f9 \pm f8$

10) $\frac{8x^6 - 6x^3 - 4}{2x^4} = \frac{[8x^3(8x^6 - 6x^3 - 4)] - 48x^5 - (8x^2)(2x^4)}{(2x^4)^2}$

$F = F(x) = \left[\frac{F}{5}\right]$

11) $(7x^2 + 4x) + (6x^3 - 2x^2) =$

$18x^2(7x^2 + 4x) + 14x(6x^3 - 2x^2)$

$F = F(x) = F5 \pm F5$

12) $(3x^5 + C) - (8x^2 - 2x)$

$16x(3x^5 + C) - 15x^4(8x^2 - 2x)$

$F = F(x) = F5 \pm F5$

13) $\frac{2x^3 - x^2}{6x^2 + x + 2} = F(x)[-F(x)] = \frac{2x^3 - x^2}{6x^2 + x + 2}$

$\frac{(12x+1)(2x^3 - x^2) - (6x^2 - 2)(16x^2 + x + 2)}{(6x^2 + x + 2)^2}$

14) $(6x^4 + 2x^5) - (2x^6 + x^5$

$R = 12x^5(6x^4 + 2x^5) - 24x^3(6x^4 + 2x^5)$

$F = F(x) = F5 \pm F5$

15) $-F(x) = 78 = 0 \; F'(x)$

$F = F(x) = 0.$