Ricardo Alonso Guillén Narváez

Dra. Rosvani Margine Morales Irecta

Ejercicios

Biomatematicas

Segundo semestre

"A"

Comitán de Domínguez Chiapas , a 3 de junio del 2023

Ejercicios

1) $f(x) = 3x^2$
$f(x) = 3(2 \cdot x^{2-1})$
$= 3(3x)$
$= 6x$

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

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

4) $f(x) = -2x + 2$
$f(x) = (-2(1) + 2$
$f(x) = -2 + 2$
$= 0$

5) $f(x) = -2x^2 - 5$
$f(x) = (-2(2x^{2-1}) + 5$
$f(x) = -4x - 5$

6) $f(x) = 4x^3 + 6x$
$f(x) = 4(3x^{3-1}) + 6x$
$f(x) = 12x^2 + 6x$

7) $f(x) = 8x^6$
$f(x) = 8(6 \cdot x^{6-1})$
$= 8(6x^5)$
$= 46x^5$

8) $f(x) = 7$
$f(x) = 0$

9) $f(x) = (3x^2 + 2x) + (6x^8 + 6)$

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

⑤ Derivada de 1 producto

$f(x) = (f \cdot g)$
$f(x) = (f \cdot g') + (f' \cdot g)$

Derivada de la 2° función por la 1° función +
~~derivada~~ Derivada de la 2° función por la 2° función

Ejemplo

$f(x) = (4x + 1) + (10x^2 - 5)$
$= (20x \cdot (4x + 1)) + (4(10x^2 - 5))$
$= 80x^2 + 20x + 40x^2 - 20$

$= 120x^2 + 20x - 20$

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

$= [18x^2 - 4x (7x^2 + 4x)] + [4x + 4(6x^3 - 2x^2) \cdot ?]$

$= 126x^4 + 72x^3 - 28x^2 - 16x^2 + (8x^4 - 28x^3 + 24x^3 - 8x^2)$

$= 210x^4 + 40x^3 - 28x^2$

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

$= [6x^2 - 4x - 8x^2] + [4x^3 (2x^2 + x)]$

$= 8x^3 - 12x^3 + 12x^2 + 3x$

$= 20x^3 - 10x$

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

$= [3x (9x^2 + 3x)] + [18x (x^3 + x^2)]$

$= 27x^3 + 9x^2 + 18x^4 + 18x^3$

$= 3x + 2$

$= 45x^4 + 18x^3 + 9x^2$

4) $f(x) = \dfrac{8x^6 - 6x^3 - 4}{2x^4}$

$= [48x^5 - 18x^2 (2x^4)] - [8x^3 (8x^6 - 6x^3 - 4) / (2x^4)^2]$

$= 96x^9 - 36x^6 - (64x^9 - 48x^6 - 32x^3) / (2x^4)^2$

$= \dfrac{+32x^9 - 12x^6 - 32x^3}{(2x^4)^2}$
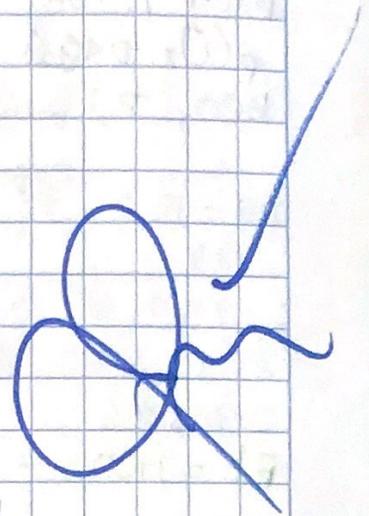
6) $f(x) = \dfrac{5x^2 + 4x}{6x^3}$

$= [10x + 4(6x^3)] - [18x^2 (5x^2 + 4x)] / (6x^3)^2$

$= 60x^4 + 24x^3 - (90x^4 + 72x^3) / (6x^3)^2$

$= -30x^4 + 48x^3$

③ EB = (8.9 + (10(7.293 - 7.4)) - 24

$$= 8.9 + (10(-0.107)) - 24$$

$$= 8.9 - 1.07 - 24 \quad = -16.17$$

④ EB = (12.7 + (10(7.395 - 7.4)) - 24

$$= 12.7 + (10(-0.005)) - 24$$

$$= 12.7 - 0.05 - 24 = -11.35$$

⑤ = EB = (17.9 + (10(7.427 - 7.4)) - 24

$$= 17.9 (10(-0.027) - 24$$

$$= 17.9 + 0.27 - 24 \quad = -5.83$$

Relación HCO_3- y PCO_2