

RESUELVE LAS DERIVADAS SIGUIENTES:

Donde a y b son constantes

Constantes

Polinómicas

a) $y = 3x^5 - ax^2 + bx$

$y = bx^3 - a$

$y = \frac{3}{5}x^2 - 5x + b$

(Ayuda)

$y' = 3x^5 - ax^2 + bx$	$y' = 3bx^2 - a$	$y' = \frac{6}{5}x - 5$
$y' = 3x^4 - ax + b$	$y' = bx^2 - a$	$y' = \frac{3}{5}x - 5$
$y' = 15x^4 - 2ax + b$	$y' = bx^2 - 0$	$y' = \frac{6}{5}x - 5x$
$y' = 15x^4 - 2ax + 0$	$y' = 3bx^2 - 0$	$y' = \frac{6}{5}x - 5b$

Polinómicas. Exponente negativo

b) $y = 4x^2 - \frac{1}{x^2}$

$y = ax^2 - \frac{b}{x^2}$

$y = -\frac{b}{x^2} + \frac{a}{x^3}$

$y' = 8x + \frac{2}{x^3}$	$y' = 2ax + \frac{2b}{x}$	$y' = -\frac{2b}{x^3} + \frac{3a}{x^4}$
$y' = 4x - \frac{2}{x^3}$	$y' = 4ax - \frac{b}{x^3}$	$y' = +\frac{2b}{x^3} - \frac{3a}{x^4}$
$y' = 8x + \frac{1}{x^3}$	$y' = 2x + \frac{1}{x^3}$	$y' = +\frac{2b}{x} - \frac{3a}{x^2}$
$y' = 8x - \frac{2}{x}$	$y' = 2ax + \frac{2b}{x^3}$	$y' = +\frac{b}{2x} - \frac{a}{3x^2}$

(Ayuda)

Polinómicas. Paréntesis

c) $y = (x-2)^3$

$y = a(x-2)^3$

$y = (x-a)^4$

$y' = (x-2)^{-4}$	$y' = 3a(x-2)^2$	$y' = (x-a)^3$
$y' = 3x^2 - 0$	$y' = 3ax^2 - 0$	$y' = 4(x-a)^3$
$y' = 6(x-2)^2$	$y' = 6a(x-2)^2$	$y' = 4ax^3 - 0$
$y' = 3(x-2)^2$	$y' = 3(ax-2)^2$	$y' = 1 - 0$

Polinómicas. Paréntesis en denominador

$$d) y = \frac{1}{(x-2)^3}$$

$$y = \frac{a}{(x-2)^3}$$

$$y = \frac{1}{(x-a)^4}$$

$$y' = \frac{-3}{(x-2)^4}$$

$$y' = \frac{-3}{(x-2)^2}$$

$$y' = \frac{1}{(x-2)^4}$$

$$y' = \frac{-1}{(x-2)^2}$$

$$y' = \frac{-3a}{(x-2)^4}$$

$$y' = \frac{-3}{(x-2)^2}$$

$$y' = \frac{a}{(x-2)^4}$$

$$y' = \frac{-3a}{(x-2)^2}$$

$$y' = \frac{-4a}{(x-a)^4}$$

$$y' = \frac{-4}{(x-a)^3}$$

$$y' = \frac{-4}{(x-a)^5}$$

$$y' = \frac{1}{4x^3 - 0}$$