$$y = \frac{11}{4x^3} + \frac{7}{3x^2}$$

$$y + \Delta y = \frac{7}{3(x+\Delta x)^2}$$

$$y + \Delta y = \frac{7}{3(x^2 + 2x\Delta + \Delta x^2)}$$

$$y + y + \Delta y = \frac{7}{3x^2 + 6x\Delta x + 3\Delta x^2} - \frac{7}{3x^2}$$

$$\Delta y = \frac{21x^2 - 21x^2 - 42x\Delta x - 21\Delta x^2}{(3x^2 + 6x\Delta x + 3\Delta x^2)(3x^2)}$$

$$\frac{\Delta y}{\Delta x} = \frac{-42x\Delta x - 21\Delta x^2}{(3x^2 + 6x\Delta x + 3\Delta x^2)(3x^2)} \div \Delta x$$

$$\frac{\Delta y}{\Delta x} = \frac{-42x - 21\Delta x}{(3x^2 + 6x\Delta x + 3\Delta x^2)(3x^2)}$$

$$\frac{\Delta y}{\Delta x} = \frac{-42x}{(3x^2)}$$

$$\frac{\Delta y}{\Delta x} = \frac{132x^2 - 44}{(4x^3)^2} \cdot -\frac{42x}{(3x^2)^2}$$

$y = 11 - 2x^3 - 6x$

$y = 11 - 2x^2 - 4x\Delta x - 2\Delta x^2 - 6x^3 - 18x^2\Delta x - 18 x\Delta x^2 - 6\Delta x^3$

$\frac{y + \Delta y}{\Delta x} = -4x\Delta x - 2\Delta x^2 - 18x^2\Delta x - 18\Delta x - 6\Delta x^3 \div \Delta x$

$\frac{\Delta y}{\Delta x} = -4x - 2\Delta x - 18x^2 - 18x\Delta x - 6\Delta x^2$

$\lim_{\Delta x \to 0}$

$\frac{\Delta y}{\Delta x} = -4x$

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

$y = \frac{1}{(x + \Delta x) + 8}$

$y = \frac{1}{x + \Delta x + 8} - \frac{1}{x+8}$

$= \frac{x + 8 - x - \Delta x - 8}{(x + \Delta x + 8)(x + 8)}$

$= \frac{\Delta x}{(x + \Delta x + 8)(x+8)} \div \Delta x = \frac{1}{(x + \Delta x + 8)(x+8)}$

$\lim_{\Delta x \to 0}$

$\frac{1}{(x+8)^2}$

$$y = \frac{5}{3x-4}$$

$$y = \frac{5}{3x+3\Delta x-4} - \frac{5}{3x-4}$$

$$\frac{15x - 20 - 15x + 15\Delta x - 20}{(3x+3\Delta x-4)(3x-4)}$$

$$y + \frac{\Delta y}{\Delta x} = \frac{15\Delta x}{(3x+3\Delta x-4)(3x-4)} \div \Delta x$$

$$\frac{\Delta y}{\Delta x} = \frac{-15}{(3x+3\Delta x-4)(3x-4)}$$

$$\frac{\Delta y}{\Delta x} = \frac{-15}{(3x-4)^2}$$

$$y = \frac{3x+2}{2x-1}$$

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$$y = \frac{3x+3\Delta x+2}{2x+2\Delta x-1} - \frac{3x+2}{2x-1}$$

$$\frac{6x + 16\Delta - 3x + 4x + 4\Delta - 2 - 6\Delta x - 4x - 3x}{(2x+2\Delta x-1)(2x-1)}$$

$$\frac{\Delta y}{\Delta x} = \frac{4\Delta x + 3\Delta x}{(\text{"})(\text{"})} \div \Delta x$$

$$\frac{\Delta y}{\Delta x} = \frac{4+3}{(2x+2\Delta x-1)(2x-1)}$$

$$\frac{\Delta y}{\Delta x} = \frac{7}{(2x-1)^2}$$

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(1)

$Y = 2x^3 - 6x^2 - 7x + 11$

$Y = 2(x^3 - 3x^2\Delta x + 3x\Delta x^2 + \Delta x^3) - 6(x^2 + 2x\Delta x + \Delta x^2) + (x + \Delta x) + 11$

$Y = 2x^3 + 6x^2\Delta x + 6x\Delta x^2 + 2\Delta x^3 - 6x^2 - 12x\Delta x - 6\Delta x^2 - 7x - 7\Delta x + 11$

1	2	3	4
$-2x^3$	$+6x^2$	$+7x$	$+11$

CFN:

$$Y + \frac{\Delta y}{\Delta x} = 6x\frac{\Delta x}{\Delta x} + 6x\frac{\Delta x}{\Delta x} + 12x\frac{\Delta x}{\Delta x} - 6\frac{\Delta x^2}{\Delta x} - 7\frac{\Delta x}{\Delta x} \div \Delta x$$

$$\frac{\Delta}{\Delta x}: 6x^2 + 6x\Delta x + 2\Delta x^2 - 12x - 6\Delta x - 7 \quad \lim \Delta x \to$$

$$\frac{\Delta y}{\Delta x} = 6x^2 - 12x - 7$$

$y = (1+2x)^2$

$y = 1 + 4x$

$y + \Delta y = 1 + 4x + 4\Delta x - 1 - 4x$

$y = 4\Delta x - \Delta x$

$\frac{\Delta y}{\Delta x} = 4$

(10) $y = \frac{3}{5x^2} - \frac{3}{4x} + \frac{1}{8}$

$y = \frac{-3}{4x}$

$y + \Delta y = \frac{-3}{4x + 4\Delta x} \quad \frac{-3}{4x}$

$x\,4 = \frac{12x - 12x - 12\Delta x}{(4x + 4\Delta x)(4x)}$

$\div \Delta x$

$\frac{\Delta y}{\Delta x} = \frac{-12\Delta x}{(4x + 4\Delta x)(4x)}$

$\frac{\Delta y}{\Delta x} = \frac{12}{(4x + 4\Delta x)(4x)}$ $\lim_{\Delta x \to 0}$

$\frac{\Delta y}{\Delta x} = \frac{12}{(4x)^2}$ $\frac{\Delta y}{\Delta x} = \frac{-36x}{(9x^2)^{11}}$ $\frac{12}{(4x)^2}$

UDS

Mi Universidad

calculo

alberto bermudez trujillo

recursos humanos

plataforma