Tema: Josthin Fernando Vaca Merelo

ESTILO

Clases de refuerzo con Miyako

① F' y F'' $F(x) = -x^2 \rightarrow y = F(x)$

$-F'(x) = -2x$

$-F''(x) = -2$

②

$F'(x) = 0 \rightarrow C = (x, y) \rightarrow C = 0,0 \rightarrow Max$

$-2x = 0$ | $F(0) = -(0)^2$

$x = \frac{0}{-2}$ | $F(0) = 0$

$x = 0$ | $y = 0$

③ $F''(x) = 0 \rightarrow P_I = 0$ | $F''(x) = -2$

$F''(x) > 0 \rightarrow P.min = +$ | $F''(0) = -2$

$F''(x) < 0 \rightarrow P.max = -$

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④ $F(x) = 2x^3 - 4x^2$ | Aux $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

$F'(x) = 6x^2 - 8x$

$F''(x) = 12x - 8$

② $F'(x) = 0 \rightarrow ?$

$6x^2 - 8 = 0$

$x(6x - 8) = 0$

$6x - 8 = 0$

$6x = 8$

$x = \frac{8}{6} = \frac{4}{3}$

$F = \left(\frac{4}{3}\right) = 2\left(\frac{4}{3}\right)^3 - 4\left(\frac{4}{3}\right)^2$

$F'\left(\frac{4}{3}\right) = 2 \cdot \frac{64}{27} = 4\frac{16}{9}$

$F\left(\frac{4}{3}\right) = \frac{128}{27} - \frac{64}{9} = \frac{-64}{27} = X$

$F''(C) = 12x - 8$

$F''\left(\frac{4}{3}\right) = 12\left(\frac{4}{3}\right) - 8$

$F''\left(\frac{4}{3}\right) = \frac{12}{1} \cdot \frac{4}{3} - 8$

$F''\left(\frac{4}{3}\right) = 16 - 8 = 8\ min$

$F''(0) = 12(0) - 8$

$F''(0) = -8\ Max$

Notas

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$\frac{108}{27} = \frac{64}{4}$

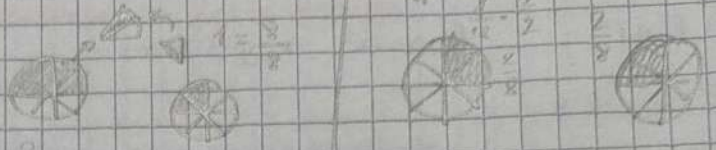
$\frac{108}{27} \cdot \frac{64}{4} \cdot \frac{3}{3}$

$\frac{108}{27} - \frac{192}{27} = \frac{-64}{27}$

$1 = \frac{4}{4}$

$\frac{1}{4} + \frac{1}{4} = \frac{2}{4}$

$\frac{1}{4} = \frac{2}{8}$



$\frac{1}{8} + \frac{1}{8} = \frac{1}{4} + \frac{1}{4} = \frac{2}{4} = \frac{1}{2} + \frac{2}{8} = \frac{3}{8}$

Tarea para la casa

$\frac{5}{3} - \frac{4}{7} = \frac{35 - 12}{21} = \frac{23}{21}$

$\frac{1}{2} + \frac{3}{4} = \frac{5}{4}$

$\frac{20}{9} + \frac{1}{2} = \frac{40 + 9}{18} = \frac{49}{18}$

$\frac{3}{7} + \frac{1}{5} - \frac{10}{3} = \frac{45 + 21 - 350}{105} = \frac{-284}{105}$

$\lim_{x \to \infty} \left[\frac{0}{0} \quad \frac{\infty}{\infty}\right]$ ✓

$\lim_{x \to 0} \frac{\ln x}{x - 1} \quad \lim_{x \to 1} \frac{\frac{1}{x}}{1} = \frac{1}{x}$

$f(x) = \ln(x)$ $\quad g(x) = x - 1$

$f'(x) = \frac{1}{x}$ $\quad g'(x) = 1$

$\lim_{x \to 1} \frac{1}{x}$

$\lim_{x \to 1} \frac{1}{(1)} = 1$

$F(x) = e^x$

$F'(x) = e^x$

$(x) = \text{sen}(3x)$

$(x) = 3 \cdot \cos(3x)$

$g(x) = x - \frac{3}{2} \cdot \text{sen}(2x)$

$g'(x) = 1 - \frac{3}{2} \cdot 2 \cdot \cos(2x)$

$g'(x) = 1 - 3\cos(2x)$

$\lim_{x \to 0} \frac{3\cos(3x)}{1 - 3\cos(2x)}$

$\lim_{x \to 0} \frac{3\cos(0)}{1 - 3\cos(2 \cdot 0)}$

$\lim_{x \to 0} \frac{3 \cdot 1}{1 - 3 \cdot 1} = \frac{3}{-2} = -\frac{3}{2}$

Notas

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A 5 x, x^2

A = 2
V = 3

Aux
$x^2 \cdot y = 252$
$y = \frac{252}{x^2}$

$V = 252 m^3 = y \cdot x \cdot y = V = x^2 \cdot y$

$F = \square = 5 \cdot x^2$

$T = \square = 2,5 \cdot x^2$

$2 = \square = 3,5 \cdot 4 \cdot xy$

$F(x) = 5x^2 + 2,5x^2 + 14xy$

$F(x) = 7,5x^2 + 14x \cdot \left(\frac{252}{x^2}\right)$

$F(x) = 15x + -\left(\frac{3528}{x^2}\right)$

$f(x) = -\frac{3528}{x^2} + 15x$

$-\frac{3528}{x^2} + 15x = 0$

$-\frac{3528}{x^2} = -15x$

$-3528 = -15x \cdot x^2$

$-3528 = -15x^3$

$x^3 = \frac{3528}{15}$

Aux.

$b(x) = \frac{3528}{x^1}$

$b'(x) = 3528 \cdot x^{1-1}$

$b'(x) = 3528 \cdot x^{-2}$

$b'(x) = -\frac{3528}{x^2}$

f(x) y

$x^3 = \frac{1176}{5}$

$\sqrt[3]{x^3} = \sqrt[3]{\frac{1176}{5}}$

$x = 6,17$

$F(x) = 7,5x^2 + \frac{3528}{x}$

$F(6,17) = 7,5\,(6,17)^2 + \frac{3528}{(6,17)}$

$F(6,17) = 285,51 + 57,79$

$f(x = 6,17) = 857,3$

$y = \frac{252}{x^2}$

$y = \frac{252}{(6,17)^2}$

$y = 6,61$

Notas