Nombre de la actividad: Poniendo límites

Materia: Biomatemáticas

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Grado: 2°

Grupo: “A”

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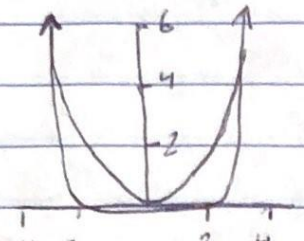
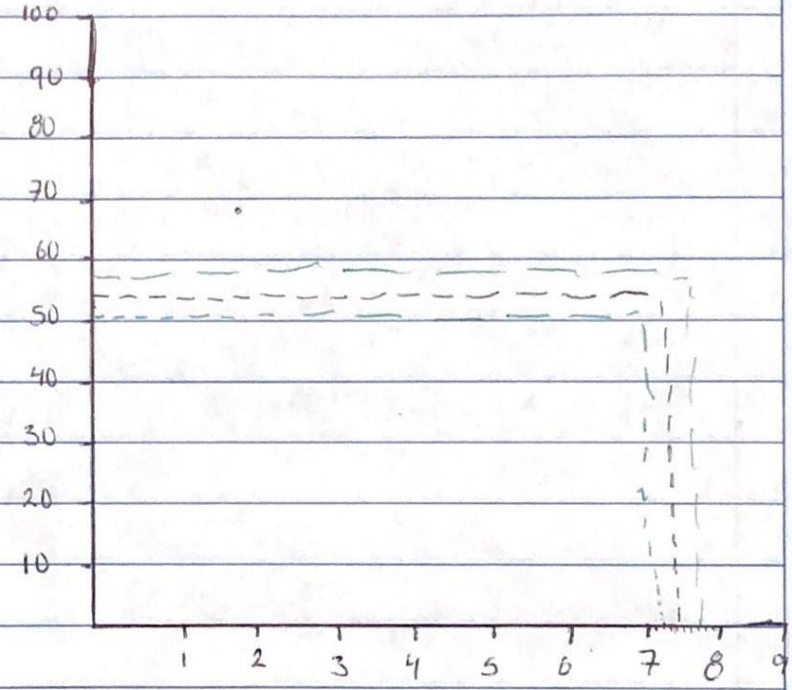
LIMITES

Ejemplo:

$\lim_{x \to 2} x^2$



$\lim x^2 = (2)^2 = 4$



- $\lim x^2$
  $x \to 2.5 = 6.25$

- $\lim x^2$
  $x \to 1.5 = 2.25$

- $\lim x^2$
  $x \to 3 = 9$

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

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

$\lim x^2$

$PH \to 7.2 = 51.84$

$PH \to 7.4 = 54.76$

$PH \to 7.6 = 57.76$

Biomatematicas

PH 6.6^2

Lim $x^2 = 43.56$

PH 7.6^3

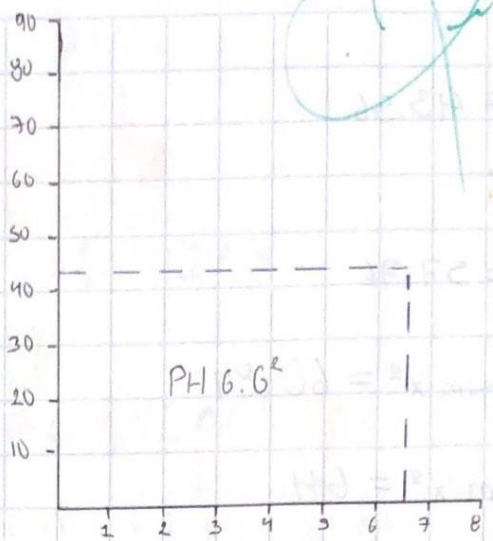
Lim $x^3 = 438.976$

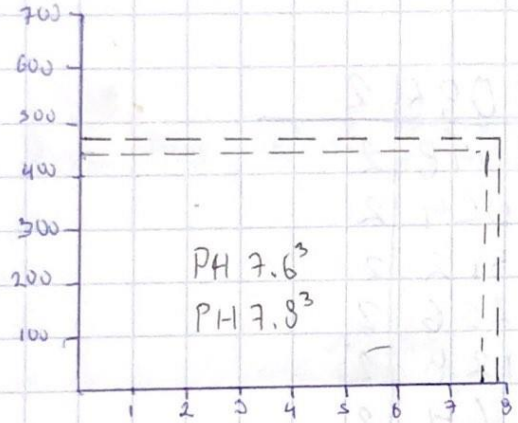
PH 7.8^3 x

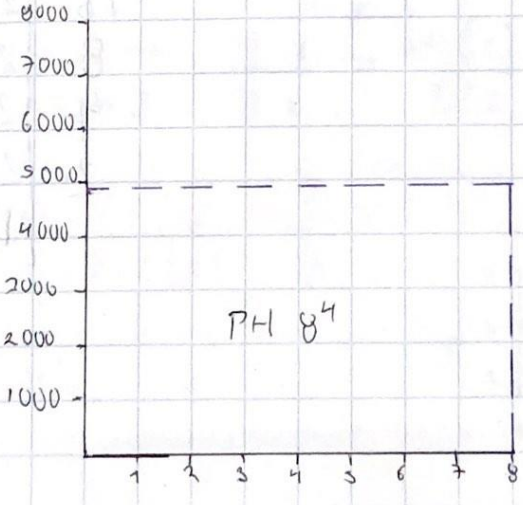
Lim $x^3 = 474.552$

PH 8^4

Lim $x^4 = 4096$







PH 6.6 ^{2}

Lim $x^2 = 43.56$

PH 7.6

Lim $x^2 = 57.76$

PH 7.8 = Lim $x^2 = 60.84$

PH 8 = Lim $x^2 = 64$

MCD

PH 8^{x4}

4096	2
2093	2
1093	3
1031	3
1011	= 36

4096	2
2048	2
1024	2
512	2
256	2
128	2
64	2
32	2
16	2
8	2
4	2
2	2
1	

$\lim_{x \to a} C = C$

$\lim_{x \to a} x = a$

$\lim_{x \to a} x^n = a^n$

$\lim_{x \to a} \sqrt[n]{x} = \sqrt[n]{a}$

PH6

PH9

PH5.5

$\lim_{x \to a} k[f(x)] = k$

$\lim_{x \to 6} k[f(6)] = 36$

$\lim_{x \to 9} k[f(9)] = 81$

$\lim_{x \to 5.5} k[f(5.5)] = 30.25$

488

Bueu MCM y MCD

$$\lim_{x \to 3} [2x \cdot 4x]$$

$$\lim [2(3) \cdot 4(3)] = 6 * 12$$

$\lim = 72$

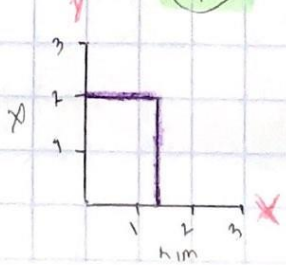
O más desarrollado

$$\left[2 \cdot \lim_{x \to 3} x\right] \left[4 \cdot \lim_{x \to 3} x\right]$$

$$\lim_{x \to a} \frac{f(x)}{G(x)} \qquad \lim_{x \to 2} \frac{4x}{8x} = \frac{4(2)}{8(2} = \frac{8}{16} = 2$$

$$\lim_{x \to 2} \frac{4x + 2x}{3x - 2x} = \frac{4 \cdot (2)}{3 \cdot (2)} = \frac{8}{6} = 1.33$$

(7)



$$\lim_{x \to a} [fx] = \lim_{x \to a} x^n$$

$$= [a]^n$$

$$\lim_{x \to a} \sqrt[n]{Fx} = \lim_{x \to a} \sqrt{x}$$

$$= \sqrt[n]{9}$$

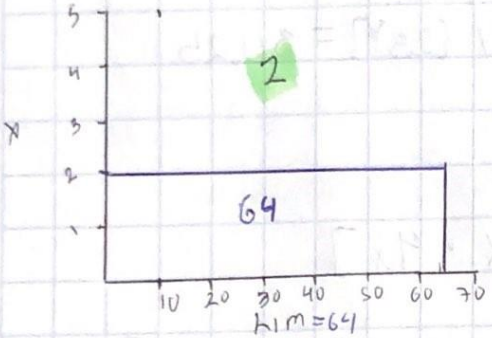
(2)

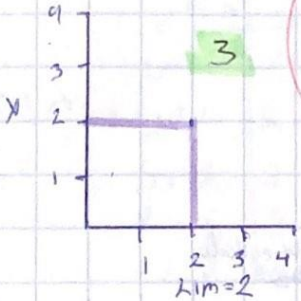
$$\lim_{x \to 2} [2x]^3 = \lim = [2(2)]^3 = [4]^3$$

$$= 64$$

(3)

$$\lim_{x \to 2} \sqrt{2x} = \lim \sqrt{2(2)} = \sqrt[2]{4} = 2$$





(1)

Limites laterales

- Cuando x se acerca a c por la derecha

$$\lim_{x \to a^+} f(x) \quad \text{ó} \quad \lim_{x \to 0^+} \frac{|x|}{x}$$

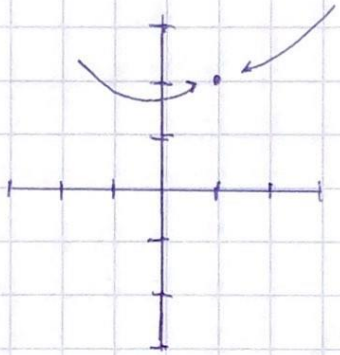
- Cuando x se acerca a c por la izquierda

$$\lim_{x \to a^-} f(x) \quad \text{ó} \quad \lim_{x \to 0^-} \frac{|x|}{x}$$

$$f(x) = \frac{|x|}{x} \begin{cases} x^2+1 & \text{si } x < 1 \\ 2 & \text{si } x > 1 \end{cases}$$

$$\lim_{x \to 1} x^2 + 1 = 2$$

$$\lim_{x \to 1^+} 2 = 2$$



$$f(x) = \frac{|x|}{x} \begin{cases} x^2 \text{ si } x < 2 & = 4 \\ 4 \text{ si } x = 2 & \\ 6 - 2x \text{ si } x > 2 & = 2 \end{cases}$$