Nombre del alumno: Poniendo Limites

Nombre del profesor: Biomatemáticas

Nombre del trabajo: Luis Antonio Meza Puon

Grado: 2°

Grupo: A

Nombre del Profesor: Dra. Rosvanni M. Morales Trecta

Comitán de Domínguez Chiapas a 20 de Febrero de 2022.

8/02/22

Dra Rosvani M. Morales Trecta

Tel: 962 114 8052

Correo: rosvamorales@gmail.com

Tareas o investigación	15%
Exposición	15%
Trabajo Final	20%
Examen	50%

Matemáticas y Biología

$\lim_{x \to a} f(x) = L$

$\lim_{x \to 2} x^2 \to 2^2 \to 4$

$\lim_{x \to 55} x^2 \to 55^2 - 3025$

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

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

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

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

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

$\lim 54.76$

$pH = 7.4$

$\lim 31.84$

$pH \to 7.2$

$\lim 57.76$

$pH = 7.6$

$2.5 \times 2.5 = 12.5 + 50 = 6.25$

$1.5 \times 1.5 = .78 + 1.5 = 2.25$

PH 6.6^2

Lim x^2

PH 7.6^3

PH 7.8^3

PH 8^4

Lim x^2 $6.6^2 = 43.56$

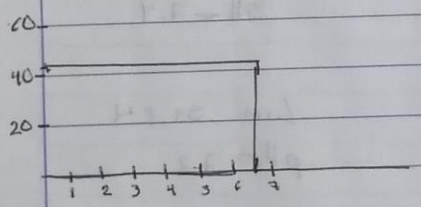
Lim x^3 $7.6^3 = 438.976$

Lim x^3 $7.8^3 = 474.552$

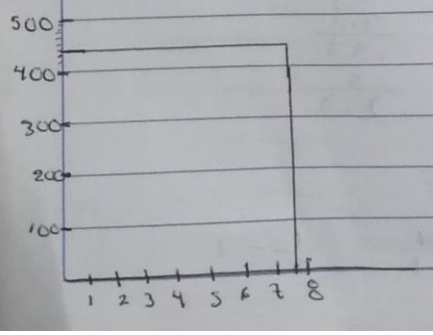
Lim x^4 $8^4 = 4096$

Lim x^2 $6.6^2 = 43.56$

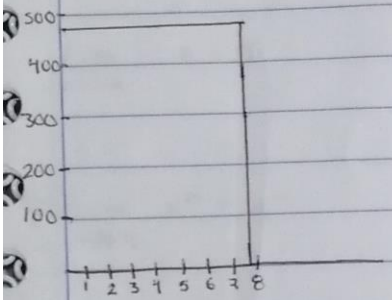
$x - 6.6$



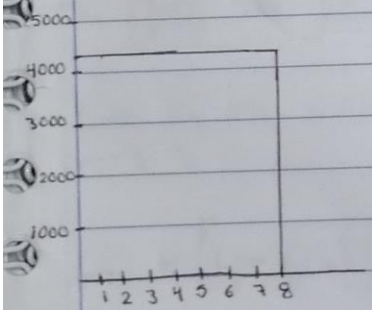
Lim x^3 $7.6^3 = 438.976$



$\lim_{x \to 7.8} x^3 \quad 7.8^3 = 474.552$



$\lim_{x \to 8} x^4 \quad 8^4 = 4096$



Lim $6.6^2 = 43.56$

Lim $7.6^2 = 57.76$

Lim $7.8^2 = 60.84$

Lim $8^2 = 64$

4096	4
1096	0
96	3
36	3
16	3
2	2
1	

$$4 \overline{)4096} \quad 1024$$
$$00\,96$$
$$16$$
$$0$$

4096	4
1024	

$$4 \overline{)1024} \quad 2$$
$$22$$

$$2 \overline{)4096} \quad 2048$$
$$1096$$
$$16$$
$$6$$

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	

$$2 \overline{)512} \quad 256$$
$$11$$
$$12$$

$$2 \overline{)256} \quad 128$$
$$016$$

$$2 \overline{)128} \quad 64$$
$$08$$

439	3

$$3 \overline{)1439} \quad 166$$
$$13$$
$$09$$
$$1$$

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

$$6.1 \times 6.1 = 37.21$$

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

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

calculado grafimente

$\lim_{x \to 6.1} 80x$ $80(6.1) = 488$

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

$k \left[\lim_{x \to 2} (fx) \right] = 2(2) = 4$

$\lim_{x \to 3} 2x + 3x = 6 + 9 = 15$

$k \left[\lim_{x \to 6.1} (fx) \right] = 6.1(6.1) = 37.21$

$k \left[\lim_{x \to 6} (fx) \right] = 6(6) = 36$

$k \left[\lim_{x \to 9} (fx) \right] = 9(9) = 81$

$k \left[\lim_{x \to 5.5} (fx) \right] = 5.5(5.5) = 30.25$

$6 \cdot 12 \quad \frac{12}{72} \quad \frac{1}{2}\sqrt{11}$

$$\lim_{x \to 3} [2x \cdot 4x] = 72$$

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

$$\lim_{x \to 2} \frac{4x}{8x} = \frac{4(2)}{8(2)} = \frac{8}{16} = 0.5$$

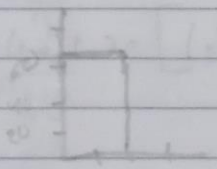
Tarea

$$\lim_{x \to 2} \frac{4x + 2x}{3x - 2x}$$

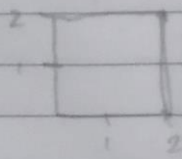
$$\lim_{x \to a} [f_x]^n = \lim_{x \to a} x^n = [a]^n$$

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

$$\lim_{x \to 2} [2x]^3 = [4]^3 = 64$$

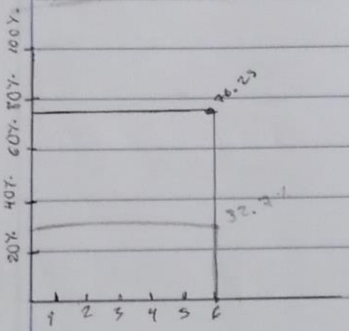


$$\lim_{x \to 2} \sqrt{2x} = \sqrt{2(2)} = \sqrt{4} = \sqrt{2} = 2$$



$$\lim_{x \to 2} \frac{4x + 2x}{3x - 2x} = \frac{4(2) + 2(2)}{3(2) + 2(2)} = \frac{8 + 4}{6 - 4} = \frac{12}{2} = 6$$

$$\lim_{x \to 6.1} 80x = 80(6.1) = 488 \rightarrow 61$$



$6.1 = 100\%$

$\cdot 2 = 32.78\%$

N = Número de población

t = tiempo

$N_t = N_0 R^t$

$N_t = 100 \cdot 2^t$

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

- Cuando x se acerca a ~~ee~~ c por la derecha

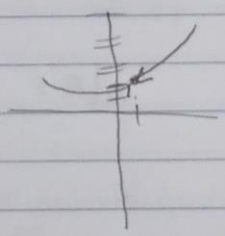
- Cuando x se racerca a c por la izquierda

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

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

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

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



$\lim_{x \to 2^-} x^2 = 4$

$\lim_{x \to 2} 4$

$\lim_{x \to 2^+} 6 - 2^{2x} 2$