UNIVERSIDAD DEL SURESTE

Campus Comitán

Licenciatura de Medicina Humana

TEMA: Poniendo limites

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SEMESTRE: 2° **GRUPO:** C

MATERIA: Biomatemáticas

DOCENTE: Rosvani Margine Morales Irecta

Matematicas ⟶ Ciencia que estudia las propiedades de los números.

Ejercicios: $\lim_{x \to A} f(x) = C$ ← formula.

1) $\lim_{x \to 2.5} x^2$ ⟶ $x^2 = 2.5^2 = (2.5)(2.5) = 6.25$

2) $\lim_{x \to 1.5} x^2$ = ⟶ $1.5^2 = (1.5)(1.5) = 2.25$

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

4) $\lim_{x \to 3} x^2$ = $x^2 = (3)(3) = 6$

4 ⟶ porcentaje
x ⟶ PH

calcular y graficar

1 ⟶ $x^2 = 6.6$
2 ⟶ $x^3 = 7.6$
3 ⟶ $x^3 = 7.8$
4 ⟶ $x^4 = .8$

1. 6.6 → x^2

Lim = (6.6)(6.6) = 43.56

2. 7.6 → x^3

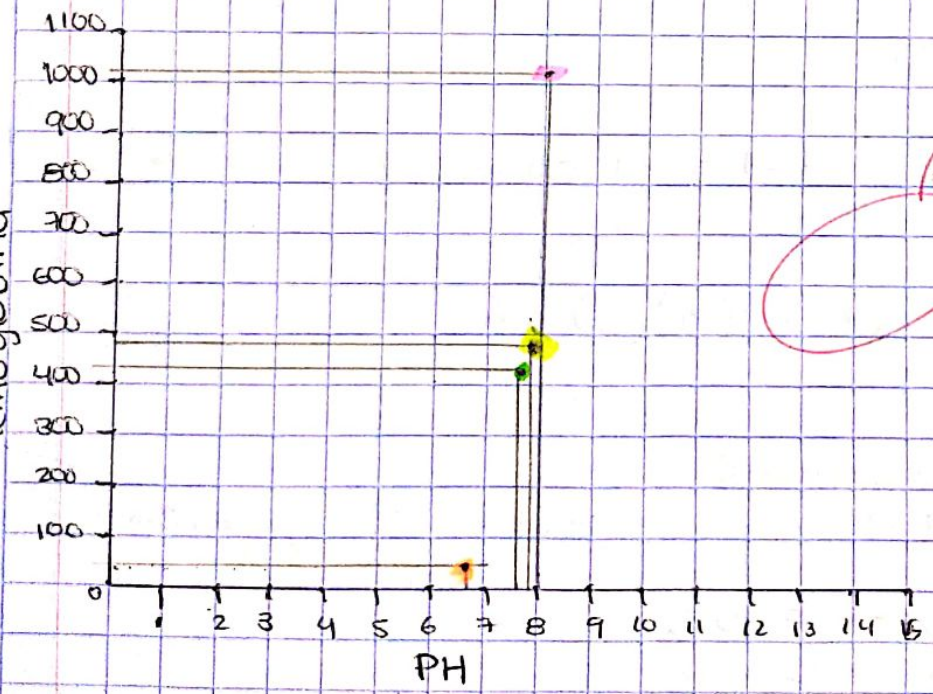
Lim = (7.6)(7.6)(7.6) = 438.97

3. 7.8 → x^3

Lim = (7.8)(7.8)(7.8) = 474.55

4. 8 → x^4

Lim = (8)(8)(8)(8) = 4,096



4,096	2
2,048	2
1,024	2
512	2
256	2
128	2
64	2
32	2
16	2
8	2
4	2
2	

MCMD de 4096 = 2

PH

8 → 100

2 → 25%

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

$\lim_{x \to 3} 5 = 5$

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

$\lim_{x \to 3} x = 3$

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

$\lim_{x \to} x^2 = 3^2 = 9$

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

$\lim_{x \to 2} \sqrt[2]{2}$

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

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

$= 4(4) = 16$

$\lim_{x \to 2} 3x^3$

$3 \lim_{x \to 2} x^3 = 3(2)^3$

$= 3(8)$

$= 24$

$\lim_{x \to 4} 6x^2$

$6 \lim_{x \to 4} x^2 = 6(4)^2$

$= 6(16)$

$= 96$

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

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

$$\lim_{x \to 3} 3x + 4x$$

$$3 \lim_{x \to 3} x + 4 \lim_{x \to 3} x$$

$$= 3(3) + 4(3)$$

$$= 9 + 12$$

$$= 21$$

$$\lim_{x \to 2} 4x^2 \cdot 3x^2$$

$$4 \lim_{x \to 2} x^2 \cdot 3 \lim_{x \to 2} x^2$$

$$= 4(2)^2 \cdot 3(2)^2$$

$$= 4(4) \cdot 3(4)$$

$$= 16 \cdot 12$$

$$= 192$$

$$\lim_{x \to 2} \frac{x^2 - 2x}{x^3 - 2x} =$$

$$\lim_{x \to 2} \frac{x^2}{x^3}$$

$$\frac{x^2 \lim}{x^3 \lim}$$

$$\frac{\lim_{x \to 2} x^2}{\lim_{x \to 2} x^3} = 2$$

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

$$\frac{-2\left(\lim_{x \to 2} x^2\right)}{3\left(\lim_{x \to 2} x^3\right)}$$

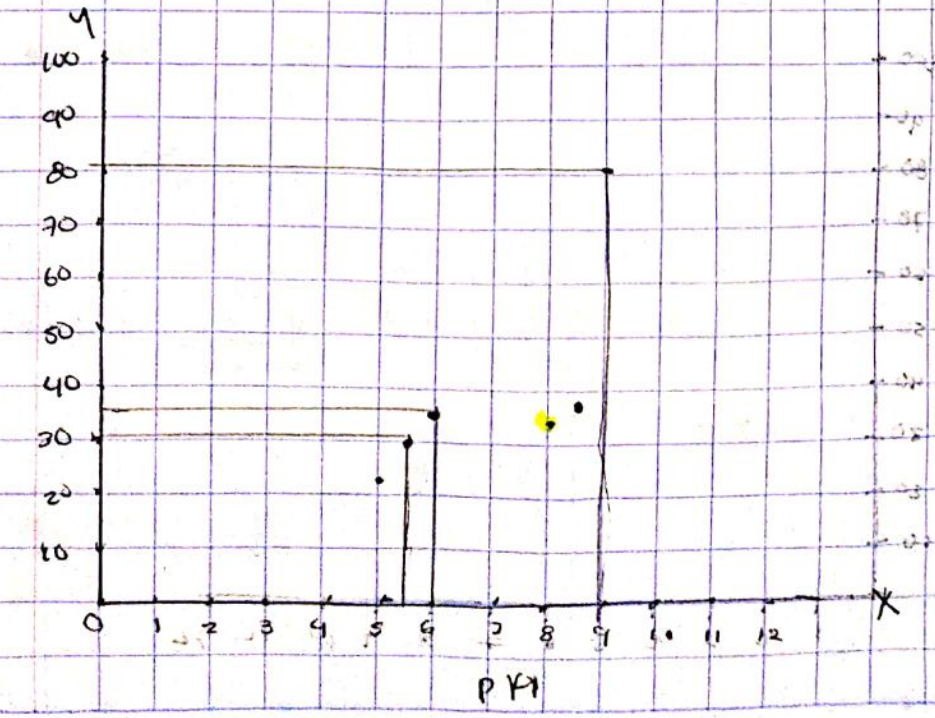
$$= \frac{-2(2)^2}{3(2)^3} = \frac{-2(4)}{3(8)} = \frac{-8}{24} = \frac{1}{3} = -0.333$$

PH 6
PH 9
PH 5.5.

C Sat + O2 Hb ?
K.C.

$\lim_{x \to 6} Kf(x)$	$\lim_{y \to 9} Kf(x)$	$\lim_{x \to 5.5} Kf(x)$
$\lim 6(6)$	$\lim 9(9)$	$\lim 5.5(5.5$
$\lim = 36$	$\lim = 81$	$\lim = 1$
		30.25

PO^2 (mmHg) = 80.



DO^2 (mm Hg) = 80

$\lim_{x \to 6} Kf(x) = \lim 6(80) = \lim = 480 =$

480	2
240	2
120	2
60	2
30	2
15	3
5	5
1	

6 → 100%
2 → 33.33

$\lim Kf(x)$

$\lim 9(80) = \lim = 720$

720	2
360	2
180	2
90	2
45	3
15	3
5	5
1	1

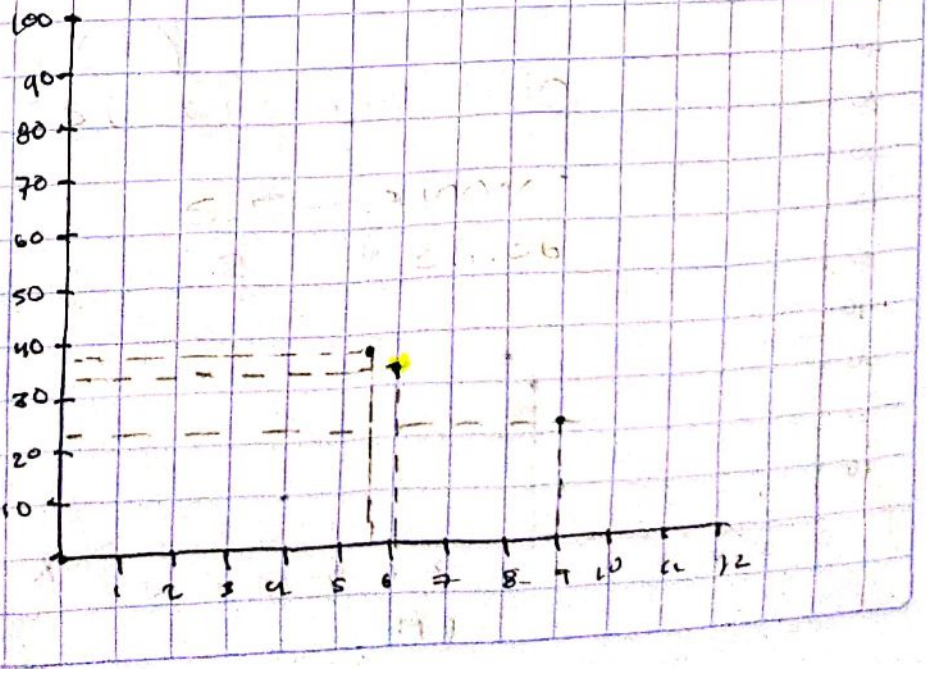
9 → 100%
2 → 22.22

$\lim Kf(x)$

$\lim 5.5(180) = \lim = 440$

5.5 → 100%
2 → 36.36

440	2
220	2
110	2
55	5
11	11



18 - Febrero - 2022

tarea.

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

$\lim \frac{4(2) + 2(2)}{3(2) - 2(2)} = \frac{8 + 4}{6 - 4} = \frac{12}{2} = 6$ //

2. $\lim_{x \to 2} [2x)^3$

$\lim [2(2)]^3 = 8(8 = 64$

3. $\lim_{x \to 6} \sqrt{2x}$

$\lim \sqrt{2(6)} = \sqrt{12} = 2\sqrt{3}$ ó 3.464

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

$\frac{+4(\lim x^2 + 5x)}{-4(\lim x^2 + 3x)} = \frac{4(2)^2 + 5(2)}{-4(2)^2 + 3(2)} = \frac{16 + 10}{-16 + 6} = \frac{26}{10}$

$= \frac{13}{5} = 2.6$

5. $\lim \frac{x^2 + 5x + 4}{x^2 + 3x - 4} = \frac{4(\lim x^2 + 5x)}{-4(\lim x^2 + 3x)} = \frac{4(2)^2 + 5(2)}{-4(2)^2 + 3(2)}$

$= \frac{16 + 10}{-16 + 6} = \frac{26}{10} = \frac{13}{5} = 2.6$

6. $\lim_{x \to 2} \frac{x^2 - 4}{2x - 2}$ $\frac{-4(\lim x^2)}{-2(\lim x^2)} = \frac{4(2)^2}{2(2(2))} = \frac{-16}{-2(4)} = \frac{16}{8}$

$= -2$

7. $\lim_{x \to 2} \frac{x^2 - 5x + 6}{x^2 - 12x + 20} = \frac{+6(\lim x^2 - 5x)}{+20(\lim x^2 + 12x)}$

$\frac{6(2)^2 - 5(2)}{20(2)^2 - 12(2)} = \frac{6(24) - 10}{20(4 - 24} = \frac{144 - 10}{80 - 24} = \frac{134}{56} = \frac{67}{28} = 2.34$

$x^2 + bx + C \leftarrow$ TRINOMIO Corrección

$$\lim_{x \to 2} \frac{x^2+x-6}{x-2} = \frac{(x+3)(x-2)}{x-2} = (x+3) = 2+3 = 5$$

$$\lim_{x \to 2} \frac{x^2+5x+4}{x^2+3x-4} = \frac{(x+4)(x+1)}{(x+4)(x-1)} = \frac{2+1}{2-1} = \frac{3}{1} = 3$$

$$\lim_{x \to 2} \frac{x^2-4}{x-2} = \frac{(x+2)(x-2)}{x-2} = (x+2) = 2+2 = 4$$

$$\lim_{x \to 2} \frac{x^2-5x+6}{x^2-12x+20} = \frac{(x-3)(x-2)}{(x-10)(x-2)} = \frac{(x-3)}{(x-10)}$$

$$= \frac{(2-3)}{(2-10} = \frac{-1}{-8} = 0.125$$

PH 7
PH 7.5
PH 8

¿Sat O^2 Hb?
PO^2 mmH° 35.

$\lim_{x \to 7} kf(x)$

1. Lim 35(7) = 245

245	5
49	7
7	7
1	1

R = 100 %

7 → 100%
7 → 100%

2. Lim 35(7.5) = 262.5

262	2
131	131

7.5 → 100%
2 → 26.66

R = 26.66

3. Lim 35(8) = 280

280	2
140	2
70	2
35	5
7	7
1	

8 → 100%
2 → 25%

R = 25