UNIVERSIDAD DEL SURESTE

CAMPUS COMITÁN

LICENCIATURA EN MEDICINA HUMANA

PONIENDO LÍMITES

BIOMATEMÁTICAS

GALIA MADELIEN MORALES IRECTA

2 “C”

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Comitan de Domínguez , Chiapas a 20 de febrero del 2022

Ejercicios:

$\lim_{x \to 2.5} x^2$ $\quad \lim x^2 = (2.5)(2.5) = 6.25$

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

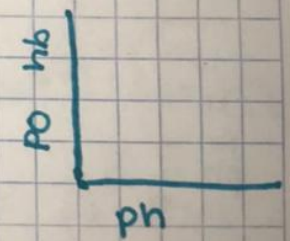
$\lim_{x \to 3} x^2$ $\quad \lim (3)^2 = (3)(3) = 9$

$\lim_{x \to 1} \frac{x^2 - 1}{x - 1}$ $\quad \lim (1)^2 = \frac{(1)(1) - 1}{(1) - 1} = 0$

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

$\lim_{ph(x) \to 7.2} x^2$ $\quad \lim (7.2)^2 = 51.84$

$\lim_{ph(x) \to 7.4} x^2$ $\quad \lim (7.4)^2 = 54.76$

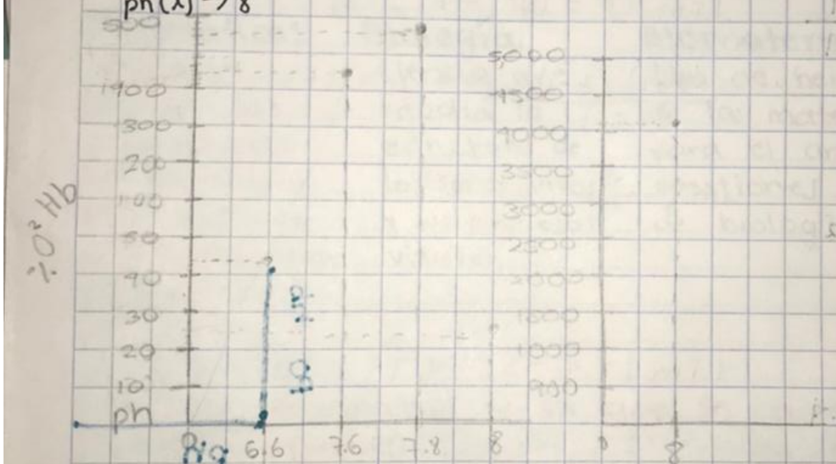


$\lim_{ph(x) \to 7.6} x^2$ $\quad \lim (7.6)^2 = 57.76$

$\lim_{ph(x) \to 7.5}$ $\quad \lim (7.5)^2 = 56.25$

(Calcular y graficar)

- $\lim x^2$, $ph(x) \to 6.6$ — $\lim (6.6)(6.6) = 43.56$
- $\lim x^3$, $ph(x) \to 7.6$ — $\lim (7.6)(7.6)(7.6) = 438.9$
- $\lim x^3$, $ph(x) \to 7.8$ — $\lim (7.8)(7.8)(7.8) = 474.5$
- $\lim x^4$, $ph(x) \to 8$ — $\lim (8)(8)(8)(8) = 4,096$



MCM ó MCD

4096	
2	2048
2	1024
2	512
2	256
2	128
2	64
2	32
2	16

$12 \times 2 = 24$

R=2

ph 8 → 100%
2 — x

25

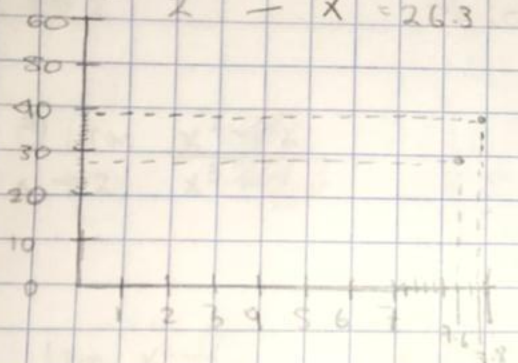
propiedades de los límites

439	
2	219
2	110
2	55 → 2
5	11
11	1

474	
2	237
3	79
3	26 → 3
2	13
13	1

ph 7.6 → 100%
2 — x = 26.3

ph 7.8 → 100%
3 → x = 38.46



TAREA

① $\lim_{x \to 2} \frac{x^2+x-6}{x-2}$ $\frac{+6 \lim x^2 + 4}{-2 \lim x} = \frac{-6 (\lim(2))^2 + 2}{-2 \lim (2)} = \frac{-6 (4) + 2}{-4} = \frac{-24+2}{-4}$

$= \frac{-22}{-4} = \frac{11}{2} = 5.5$

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

$\frac{+4 (4) + 10}{-4 (4) + 6} = \frac{+16+10}{-16+6} = \frac{26}{-10} = -\frac{26}{10} = \frac{13}{5} = 2.6$

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

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

$3\lim(3) + 4\lim(3)$

$3(3) + 4(3)$

$9 + 12 = 21$

① $\lim_{x \to 9} \sqrt{x} = \sqrt{9} = 2$

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

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

$16 \cdot 12 = 192$

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

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

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

$\frac{-2(\lim x^2)}{3(\lim x^3)} = \frac{-2(2)^2}{3(8)} = \frac{-2(4)}{3(8)} =$

$\frac{-8}{24} = -\frac{1}{3} = -0.33$

cSat O_2; Hb?

ph 6

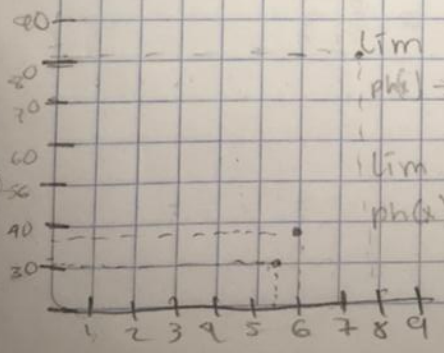
ph 9

ph 5.5

$\lim_{ph(x) \to 6} = \lim 6(6) = 36$

$\lim_{ph(x) \to 9} = \lim 9(9) = 81$

$\lim_{ph(x) \to 5.5} = \lim 5.5(5.5) = 30.25$



Presion de gas en milimetros de mercurio

480	
2 | 240	3.5
2 | 120	5.1
2 | 60	
2 | 30	
3 | 15	

$PO^2(mmHg) = 80$

$\lim_{ph(x)\to 6} PO^2(mmHg) = 80$

$\lim_{ph(6)} 80x \quad \lim 80(6) = 480 = 2.5$

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

ph = 9

$\lim 80x = \lim 80(5.5) = 440$

ph(x) = 5.5

Tarea:

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

$$\lim_{x\to 2} [2x]^3 \qquad \lim [2(2)]^3 = [4]^3 = 64$$

$$\lim_{x\to 6} \sqrt{2}x \lim \sqrt{2(6)} = \sqrt[2]{12} = \sqrt[2]{3}$$

2 <	2	12
	2	6
3	3	3
		1