

Universidad del sureste Campus Comitán

Licenciatura en Medicina Humana

Tema: Ejercicios y apuntes en clase

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Grado: 2do

Grupo: "B"

Materia: Biomatemáticas

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PASIÓN POR EDUCAR

~~PH 7.6~~

~~PH~~

PH 7.6

Lim x^3

PH $\rightarrow 7.6$ $\text{Lim } (7.6)^3 = 438.976$

PH 7.8

Lim x^3

PH $\rightarrow 7.8$ $\text{Lim } (7.8)^3 = 474.552$

PH 8

PH $\rightarrow 8$ $\text{Lim } (8)^4 = 4,096$

4,096		4,096	2	
4,096	2,048	2,048	2	Regla de 3
8		1,024	2	
		512	2	8 — 100 %
		256	2	2 — 25 %
		128	2	
		64	2	
		32	2	
		16	2	
		8	2	
		4	2	
		2	2	
		1	2	

• PH 6.6

$$\lim_{x \rightarrow 6.6} x^2 = \lim = 43.56$$

PH 7.6

$$\lim_{x \rightarrow 7.6} x^2 = \lim = 57.76$$

PH 7.8

$$\lim_{x \rightarrow 7.8} x^2 = \lim = 60.84$$

PH 8

$$\lim_{x \rightarrow 8} x^2 = \lim = 64$$

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

$$\lim_{x \rightarrow 2} (4x) \cdot (3x)$$

$$4 \lim_{x \rightarrow 2} x \cdot 3 \lim_{x \rightarrow 2} x$$

$$= 4(2) \cdot 3(2)$$
$$= 8 \cdot 6$$
$$= 48$$

$$\lim_{x \rightarrow 4} 3x \cdot 6x$$

$$3 \lim_{x \rightarrow 4} x^2 \cdot 6 \lim_{x \rightarrow 4} x$$

$$= 3(4) \cdot 6(4)$$

$$= 12 \cdot 24$$

$$= 288$$

$$\lim_{x \rightarrow 4} \frac{3x}{4x}$$

$$\lim_{x \rightarrow 4} 3 \div \lim_{x \rightarrow 4} 4$$

$$= 3(4) \quad 4(4)$$

$$= 12 \div 16 = 0.75$$

$$\lim_{x \rightarrow 5} \frac{3x - 12}{4x - 19}$$

$$\lim_{x \rightarrow 5} 3 \quad \lim_{x \rightarrow 5} 4$$

$$= 3(5) \quad 4(5)$$

~~$$= 15 \div$$~~

$$= 3 \div 1 = 3$$

$$\lim_{x \rightarrow 5} \frac{3x - 12}{4x - 19}$$

$$\lim_{x \rightarrow 5} 3 \quad \lim_{x \rightarrow 5} 4$$

$$= 3(5) \quad 4(5)$$

$$= 3 \div 1 = 3$$

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

$$\lim_{x \rightarrow 2} 5 = 5$$

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

$$\lim_{x \rightarrow 2} x = 2$$

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

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

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

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

$$\lim_{x \rightarrow 2} 2x$$

$$\lim_{x \rightarrow 3} 9x^2$$

$$9 \lim_{x \rightarrow 3} x^2 = 9(3^2) = 9(9) = 81$$

• PH 6

$$\lim_{x \rightarrow 6} 6(x)$$

$$x \rightarrow 6$$

$$6 \lim_{x \rightarrow 6} (x)$$

$$x \rightarrow 6$$

$$6(6) = \underline{\underline{36}}$$

• PH 9

$$\lim_{x \rightarrow 9} 9(x)$$

$$x \rightarrow 9$$

$$9 \lim_{x \rightarrow 9} (x)$$

$$x \rightarrow 9$$

$$9(9) = \underline{\underline{81}}$$

• PH 5.5

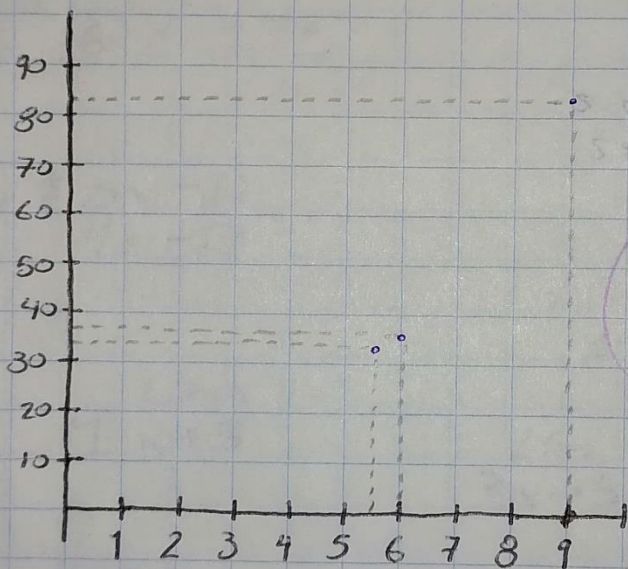
$$\lim_{x \rightarrow 5.5} 5.5(x)$$

$$x \rightarrow 5.5$$

$$5.5 \lim_{x \rightarrow 5.5} (x)$$

$$x \rightarrow 5.5$$

$$5.5(5.5) = \underline{\underline{30.25}}$$



Ejercicios (SatO² Hb?)

$$\lim_{x \rightarrow a} k(f(x)) = k \lim_{x \rightarrow a} (f(x)) = kL$$

$$\lim_{x \rightarrow 8} 6x^2$$

$$x \rightarrow 8$$

$$6 \lim_{x \rightarrow 8} x^2 = 6(8^2) = 384$$

$$x = k$$

PH 6

PH 9

PH 5.5

iSat O² hb?
PO² mmHg
k = 86

PH 5.5

$$3 - \lim_{x \rightarrow 5.5} 5.5(x)$$

$$x \rightarrow 5.5$$

$$5.5 \lim_{x \rightarrow 5.5} (x)$$

$$x \rightarrow 5.5$$

$$5.5(5.5) = \underline{\underline{30.25}}$$

PH 6

$$1 - \lim_{x \rightarrow 6} 6(x)$$

$$x \rightarrow 6$$

$$6 \lim_{x \rightarrow 6} (x)$$

$$x \rightarrow 6$$

$$6(6) = \underline{\underline{36}}$$

PH 9

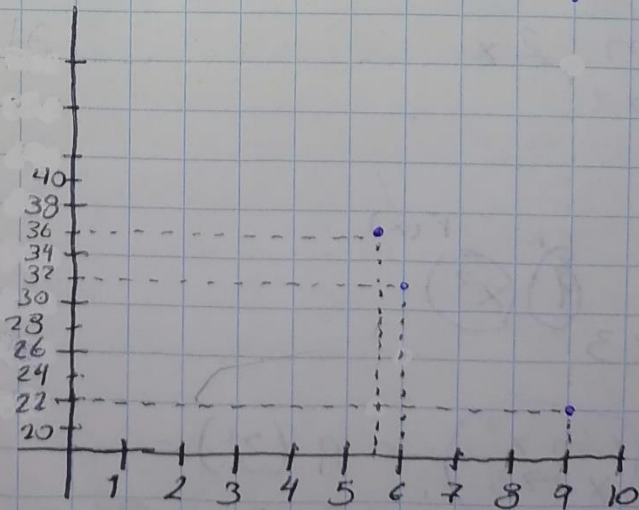
$$2 - \lim_{x \rightarrow 9} 9(x)$$

$$x \rightarrow 9$$

$$9 \lim_{x \rightarrow 9} (x)$$

$$x \rightarrow 9$$

$$9(9) = \underline{\underline{81}}$$



Irán Alonso López López

2^{do} "B"

16/feb/22

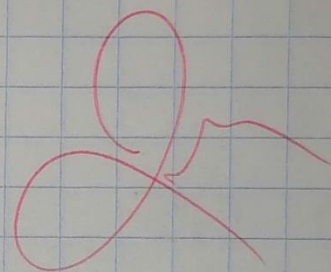
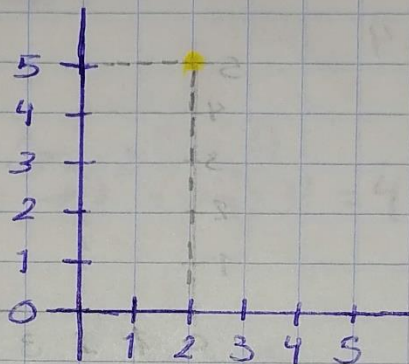
$$1.- \lim_{x \rightarrow 2} \frac{x^2 + x - 6}{x - 2}$$

$$\begin{aligned} \lim &= \frac{(x-2)(x+3)}{(x-2)} = (x+3) \\ &= 2+3 = \underline{\underline{5}} \end{aligned}$$

$$\text{SUS} = \frac{(2)^2 + 2 - 6}{2 - 2} = \frac{0}{0}$$

$$\text{SUS} = \frac{4 + 2 - 6}{0} = \frac{0}{0}$$

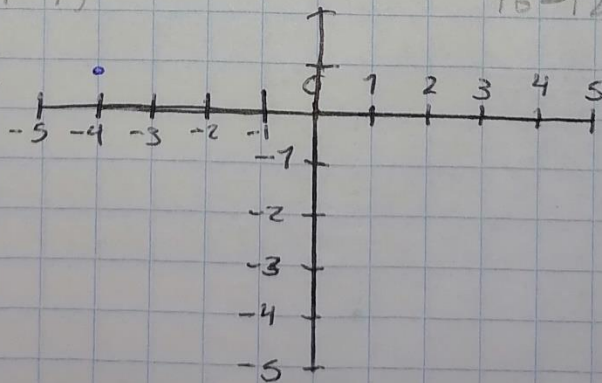
$$\text{SUS} = \frac{6 - 6}{0} = \frac{0}{0}$$



$$2.- \lim_{x \rightarrow -4} \frac{x^2 + 5x + 4}{x^2 + 3x - 4}$$

$$\begin{aligned} \lim &= \frac{(x+4)(x+1)}{(x-1)(x+4)} \\ &= \frac{(x+1)}{(x-1)} = \frac{(-4+1)}{(-4-1)} \\ &= \frac{-3}{-5} = 0.6 \end{aligned}$$

$$\begin{aligned} \text{SUS} &= \frac{(-4)^2 + 5(-4) + 4}{(-4)^2 + 3(-4) - 4} \\ &= \frac{16 - 20 + 4}{16 - 12 - 4} = \frac{0}{0} \end{aligned}$$

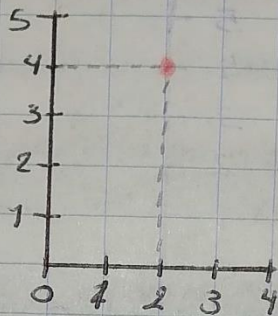


$$\lim_{x \rightarrow 2} \frac{x^2 - 4}{x - 2}$$

$$\lim \frac{(x+2)(x+2)}{x+2}$$

$$= (x+2) = 2+2 = 4$$

$$\text{Substituyendo } \frac{(2)^2 - 4}{2 - 2} = \frac{4 - 4}{0} = \frac{0}{0}$$



$$\text{Lím } 2x^3$$

$$\text{Lím } \sqrt[3]{4x}$$
$$x \rightarrow 2$$

Multiplicar

$$= \sqrt[3]{4(2)} = \sqrt[3]{8} = 2$$

Resultado que multiplicado 3 veces de 8

Resultado es el numero que multiplicado tres veces da 8

Limites laterales

Calcular $\lim_{x \rightarrow 2} f(x)$

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

Calcular $\lim_{x \rightarrow 1} f(x)$

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