Nombre de alumno: Jasson Yael López Ordoñez

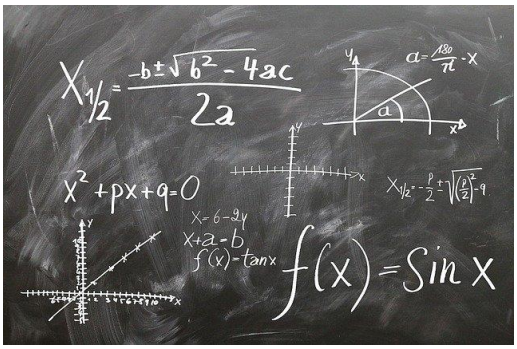
Docente: Rosvani Margine Morales Irecta

Nombre del trabajo: Primer reporte de ejercicios (totalmente a mano)

Materia: Biomatemáticas

Grado: 2 do

Grupo: A

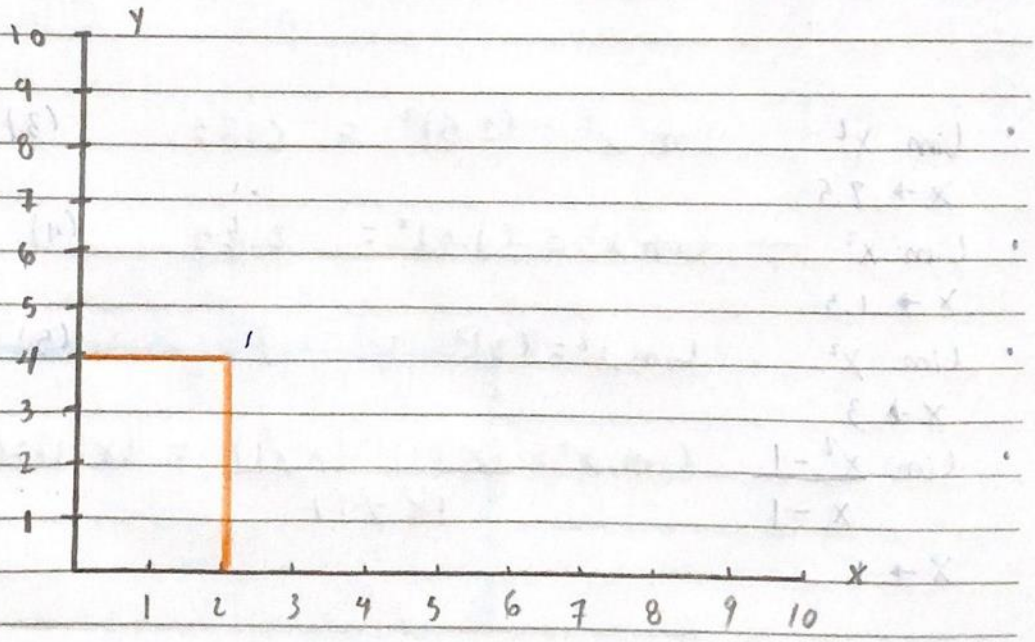


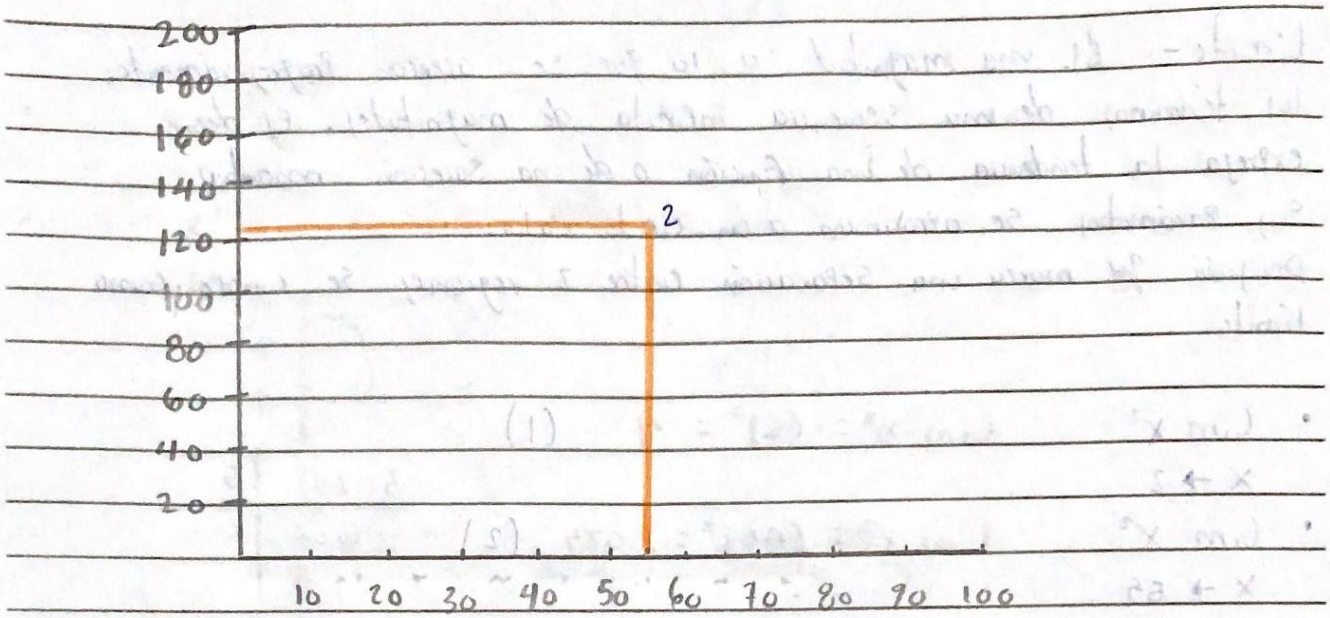
Comitán de Domínguez, Chiapas a 20 de febrero del 2022.

Límite - Es una magnitud a la que se acercan progresivamente los términos de una secuencia infinita de magnitudes. Es decir expresa la tendencia de una función o de una sucesión mientras sus parámetros se aproximan a un cierto valor.
División que marca una separación entre 2 regiones se conoce como límite.

- $\lim_{x \to 2} x^2$ $\lim x^2 = (2)^2 = 4$ (1)
- $\lim_{x \to 55} x^2$ $\lim x^2 = (55)^2 = 3025$ (2)

3025	5
605	5
121	

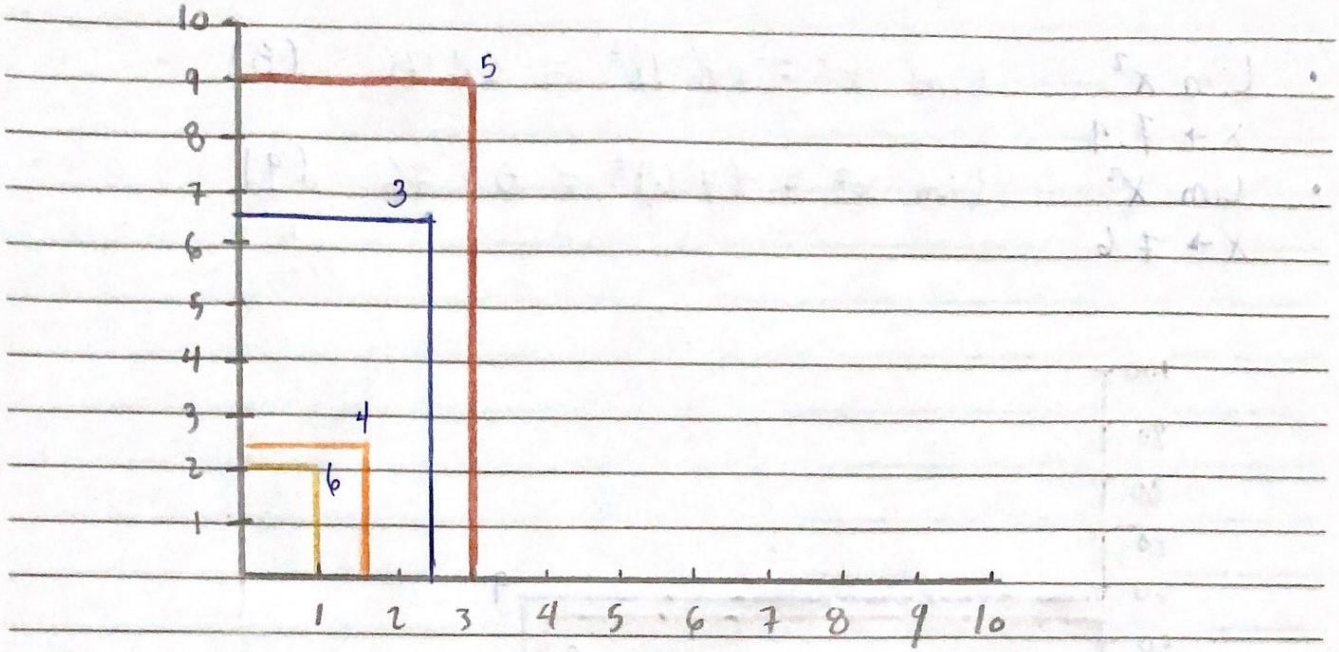




- $\lim_{x \to 2.5} x^2$ $\lim x^2 = (2.5)^2 = 6.25$ (3)
- $\lim_{x \to 1.5} x^2$ $\lim x^2 = (1.5)^2 = 2.25$ (4)
- $\lim_{x \to 3} x^2$ $\lim x^2 = (3)^2 = 9$ (5)
- $\lim_{x \to 1} \frac{x^2 - 1}{x - 1}$ $\lim x^2 = \frac{(x+1)(x-1)}{|x-1|} = (x+1) = (1+1) = 2$ (6)

- Primer límite con PH

- PH
  - $\lim_{PH \to 7.2} x^2$ $\lim x^2 = (7.2)^2 = 51.84$ (7)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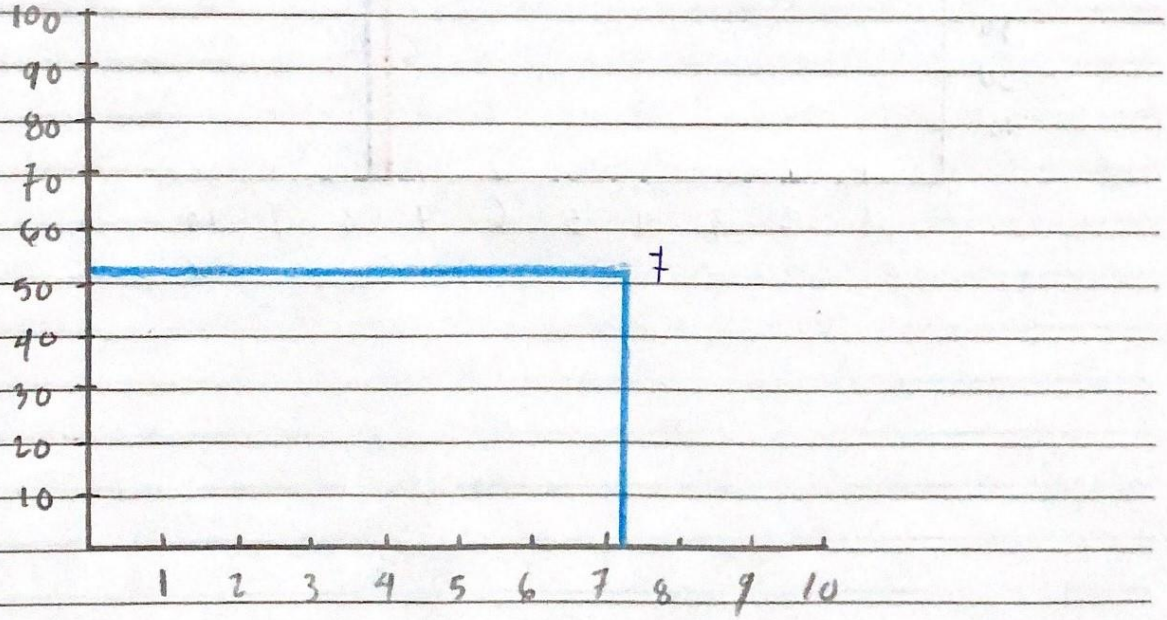
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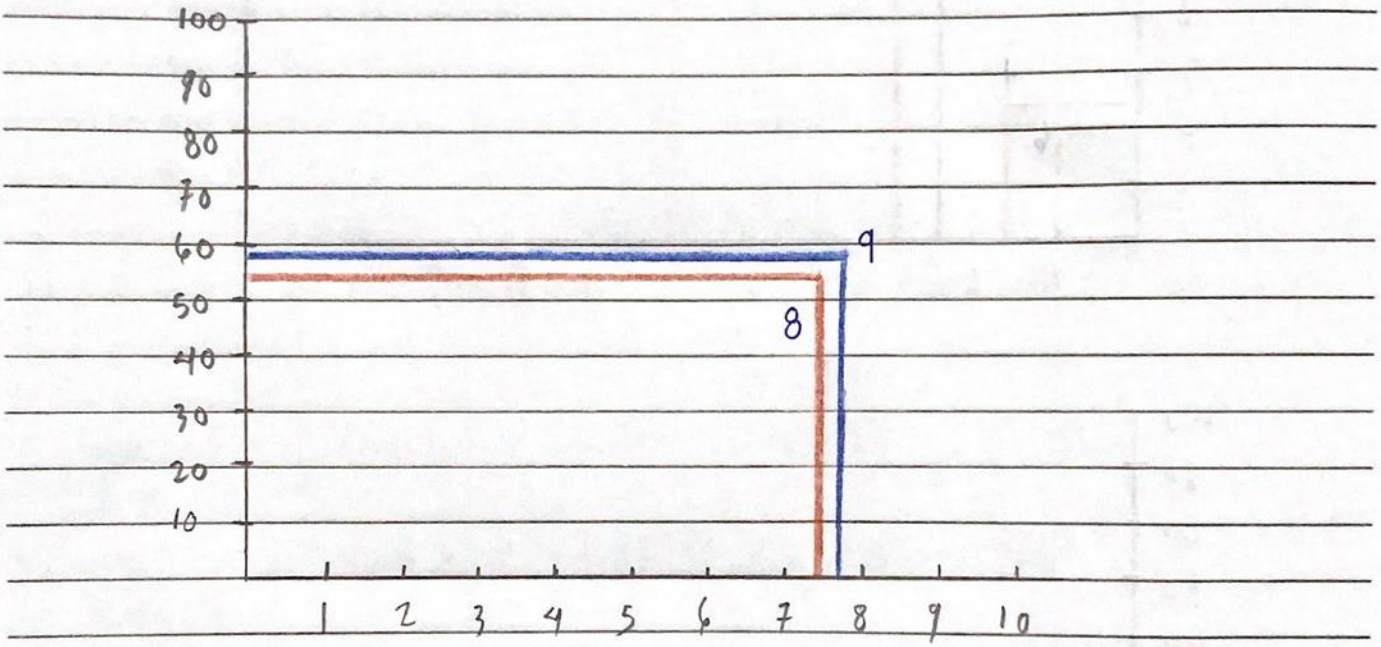
- $\lim_{x \to 7.4} x^2$ $\lim x^2 = (7.4)^2 = 54.76$ (8)
- $\lim_{x \to 7.6} x^2$ $\lim x^2 = (7.6)^2 = 57.76$ (9)



- PH 6.6 x^2

  PH 6.6 = $(6.6)^2$ = (6.6)(6.6) = 43.56 1 (10)

- PH 7.6 x^3

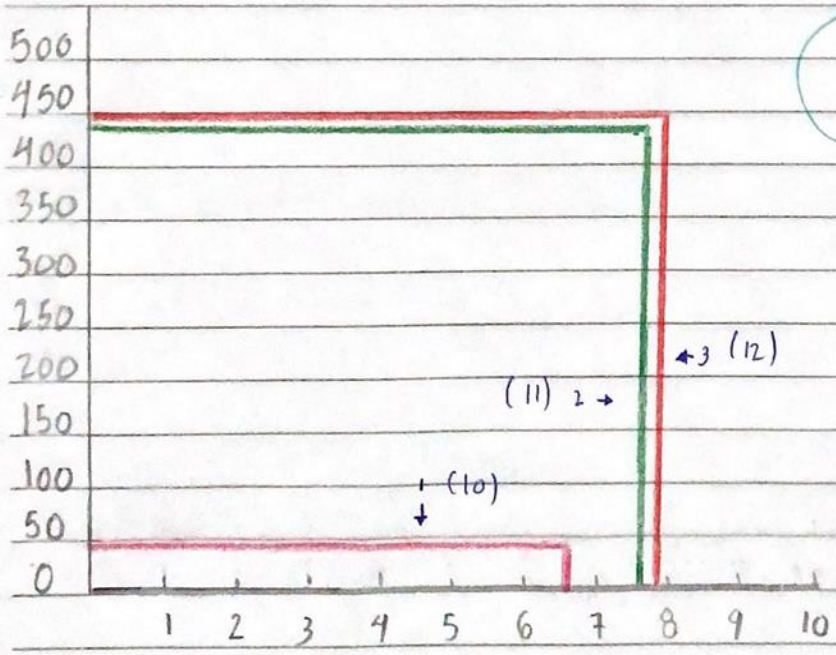
  PH 7.6 = $(7.6)^3$ = 438.976 2 (11)

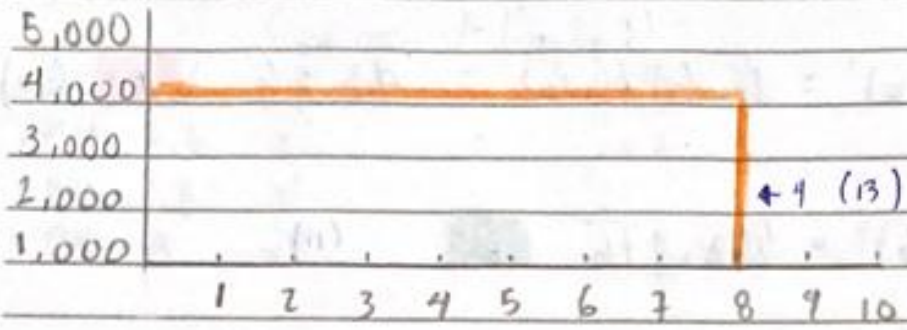
- PH 7.8 x^3

  PH 7.8 = $(7.8)^3$ = 474.552 3 (12)

- PH 8 x^4

  PH 8 = $(8)^4$ = 4,096 4 (13)

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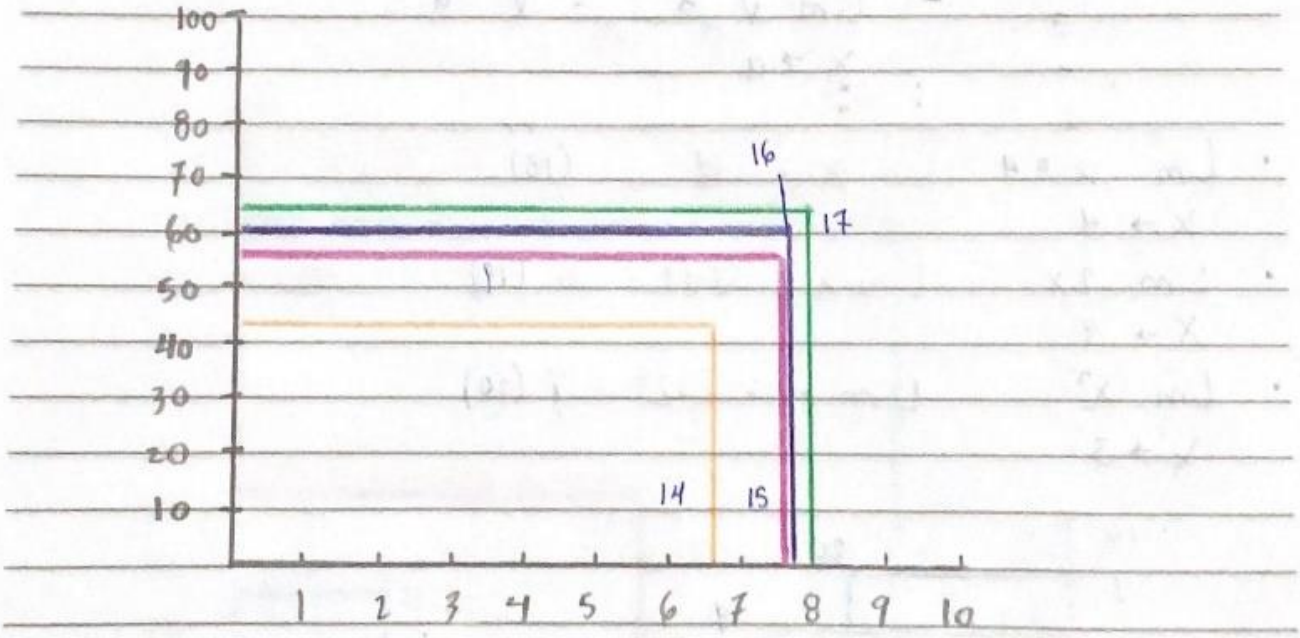
4 (13)

- Lim x^2 PH → 6.6 — Lim $x^2 = (6.6)^2 = 43.56$ (14)
- Lim x^2 PH → 7.6 — Lim $x^2 = (7.6)^2 = 57.76$ - (15)
- Lim x^2 PH → 7.8 — Lim $x^2 = (7.8)^2 = 60.84$ - (16)
- Lim x^2 PH → 8 — Lim $x^2 = (8)^2 = 64$ - (17)

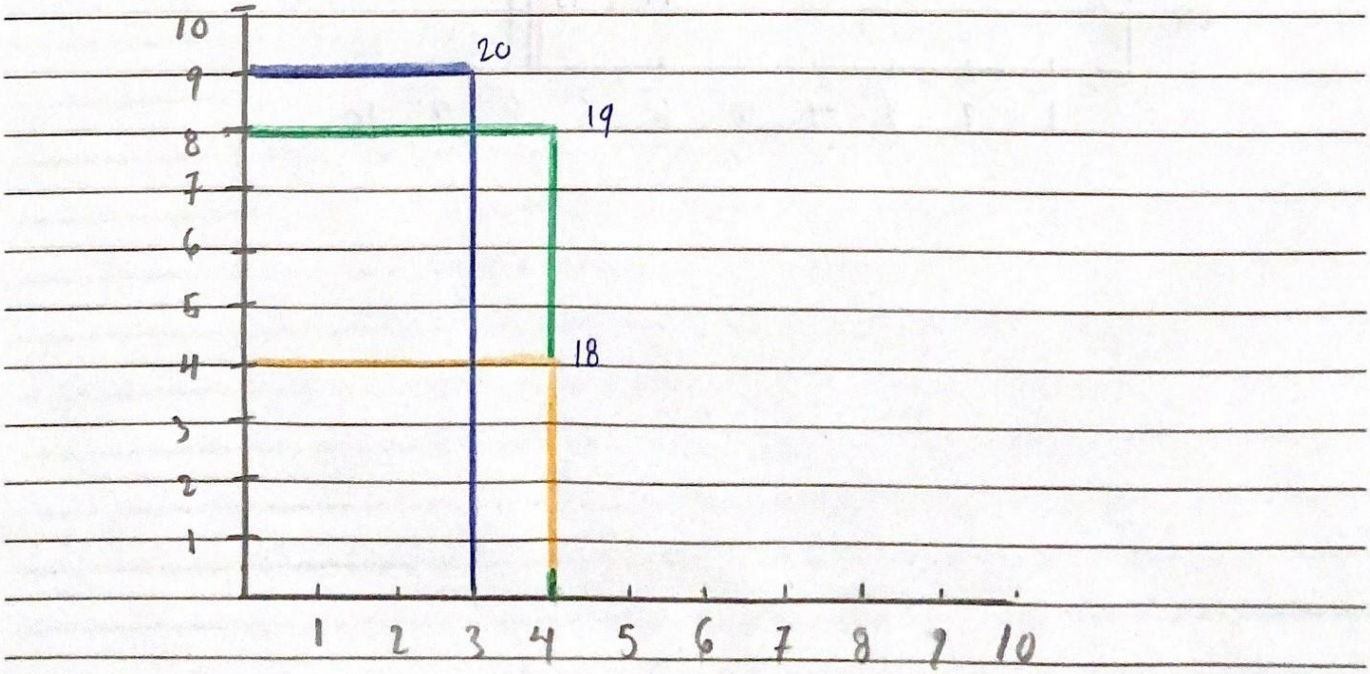


Propiedades de los límites

4 Propiedades básicas

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

- $\lim_{x \to 4} x$ $\lim x = 4$ (18)
- $\lim_{x \to 4} 2x$ $\lim 2x = 2(4) = 8$ (19)
- $\lim_{x \to 3} x^2$ $\lim x^2 = (3)^2 = 9$ (20)

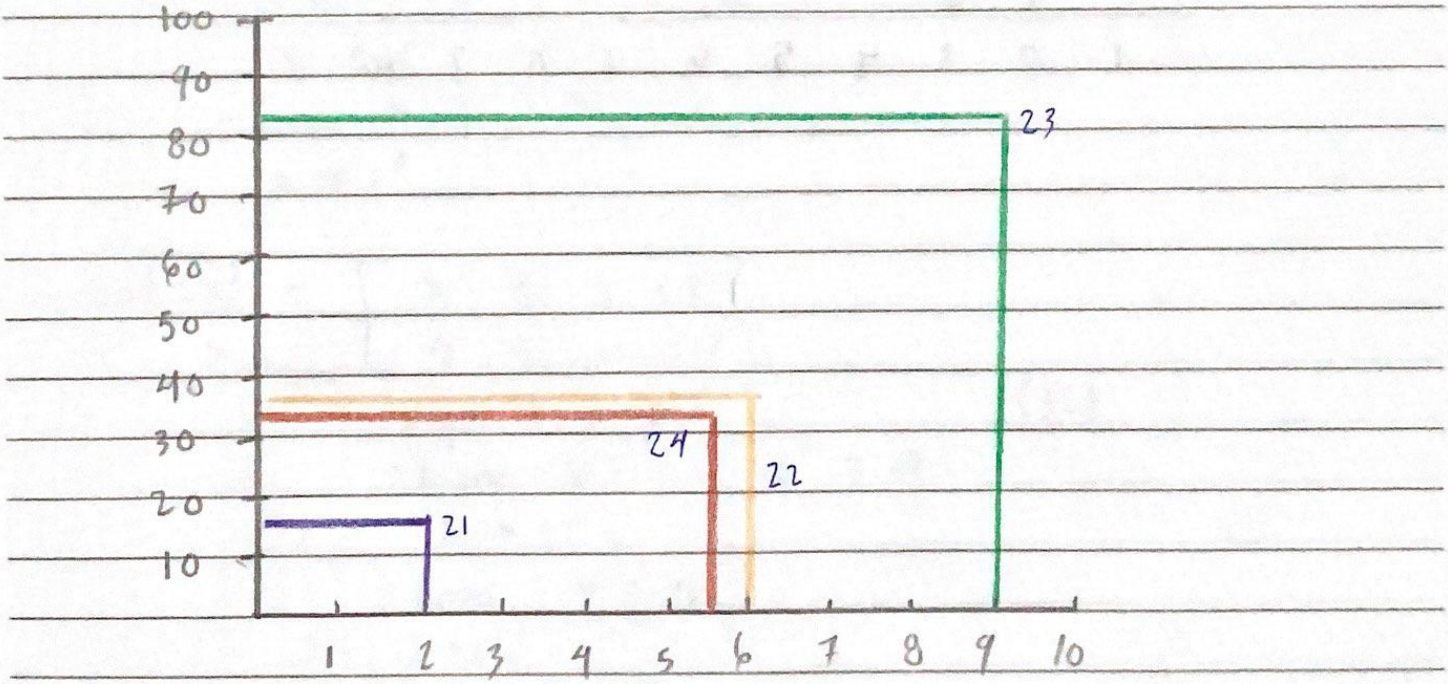


• $\lim_{x \to 2} 2x + 3x = 2(2) + 3(2) = 6 + 9 = 15$ (21)

• $\lim_{x \to 6}$ (PH) $= k(f(6)) = 36$ (22)

• $\lim_{x \to 9}$ (PH) $= k(f(9)) = 81$ (23)

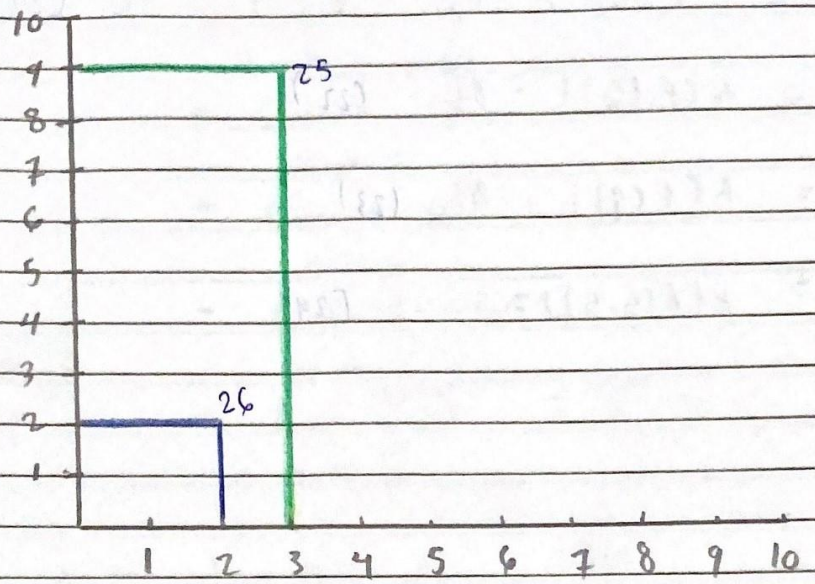
• $\lim_{x \to 5.5}$ (PH) $= k(f(5.5)) = 30.25$ [24]



• $\lim_{x \to 3} (7x \cdot 4x)$ $\lim (7(3) \cdot 4(3)) = 6 \times 12 = 72$ (25)

72 → 2 → 36 → 2 → 18 → 2 → 9

• $\lim_{x \to 2} \frac{4x}{8x}$ $\lim \frac{4(2)}{8(2)} = \frac{8}{16} = 2$ (26)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1 $\lim_{x \to 6.1} 80x = \lim = (80(6.1) = 488 = 32.7$ (27)

2 $\lim_{x \to 2} \frac{4x + 2x}{3x - 2x} = \frac{4(2) + 2(2) = 8 + 4}{3(2) - 2(2) = 6 - 4}$ $\lim = \frac{12}{2} = 6$ (28)

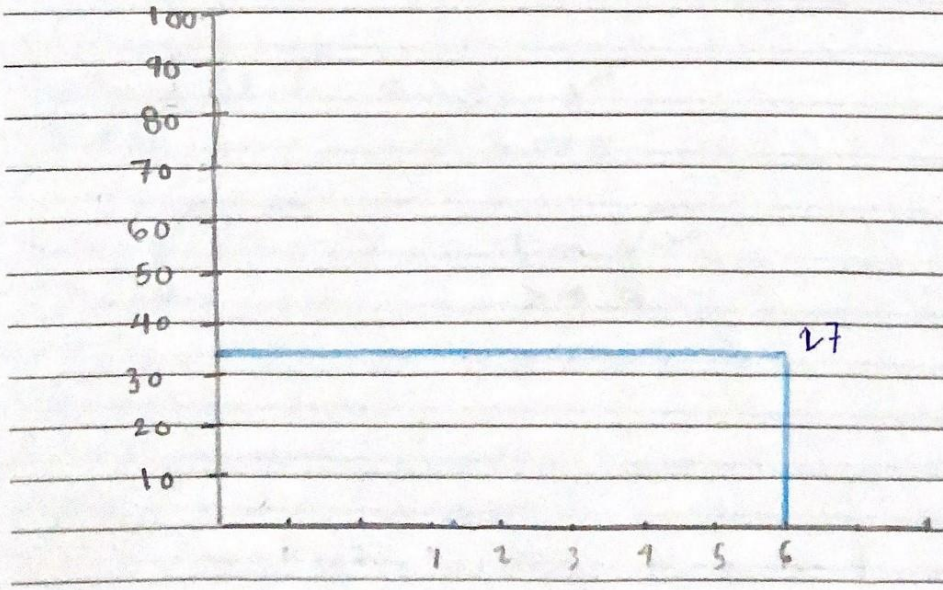
3 $\lim_{x \to 2} (2x)^3 = \lim (2(2))^3 = 64$ (29)

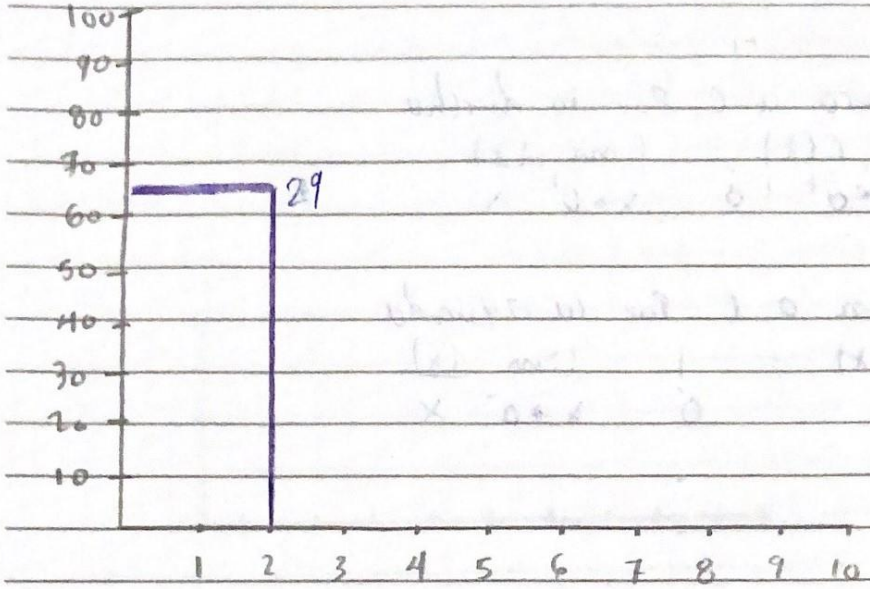
4 $\lim_{x \to 2} \sqrt{2x} = \sqrt{2(2)} = \sqrt{4} = 2$ (30)

488	2
244	2
122	2
61	2

6.1 → 100%.

2 → 2 × 100 ÷ 61 = 32.7

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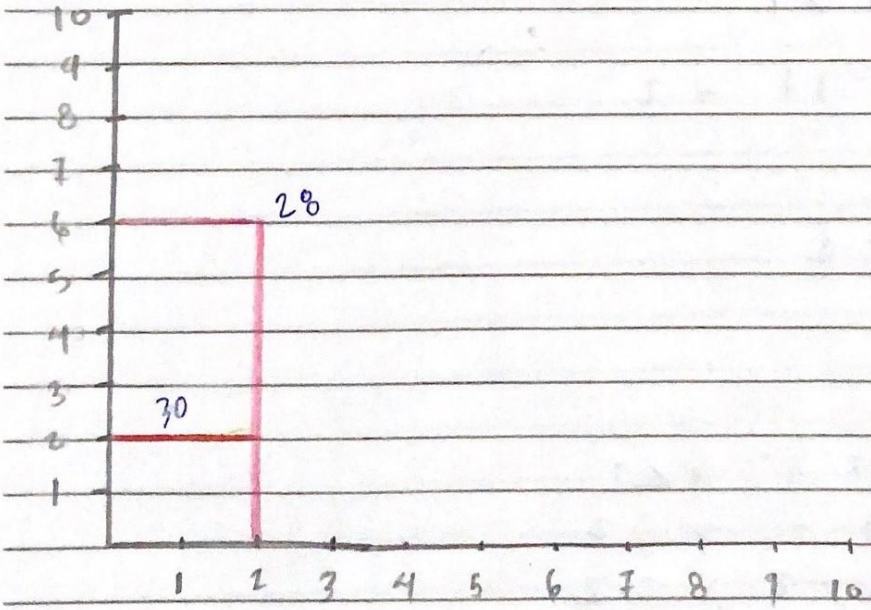
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Limites laterales.

- Cuando x se acerca a c por la derecha

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

- Cuando x se acerca a c por la izquierda

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

- $f(x) \quad \frac{(x)}{x} \begin{cases} x^2 + 1 & \text{si } x < 1 \\ 2 & \text{si } x > 1 \end{cases}$ (31)

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

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

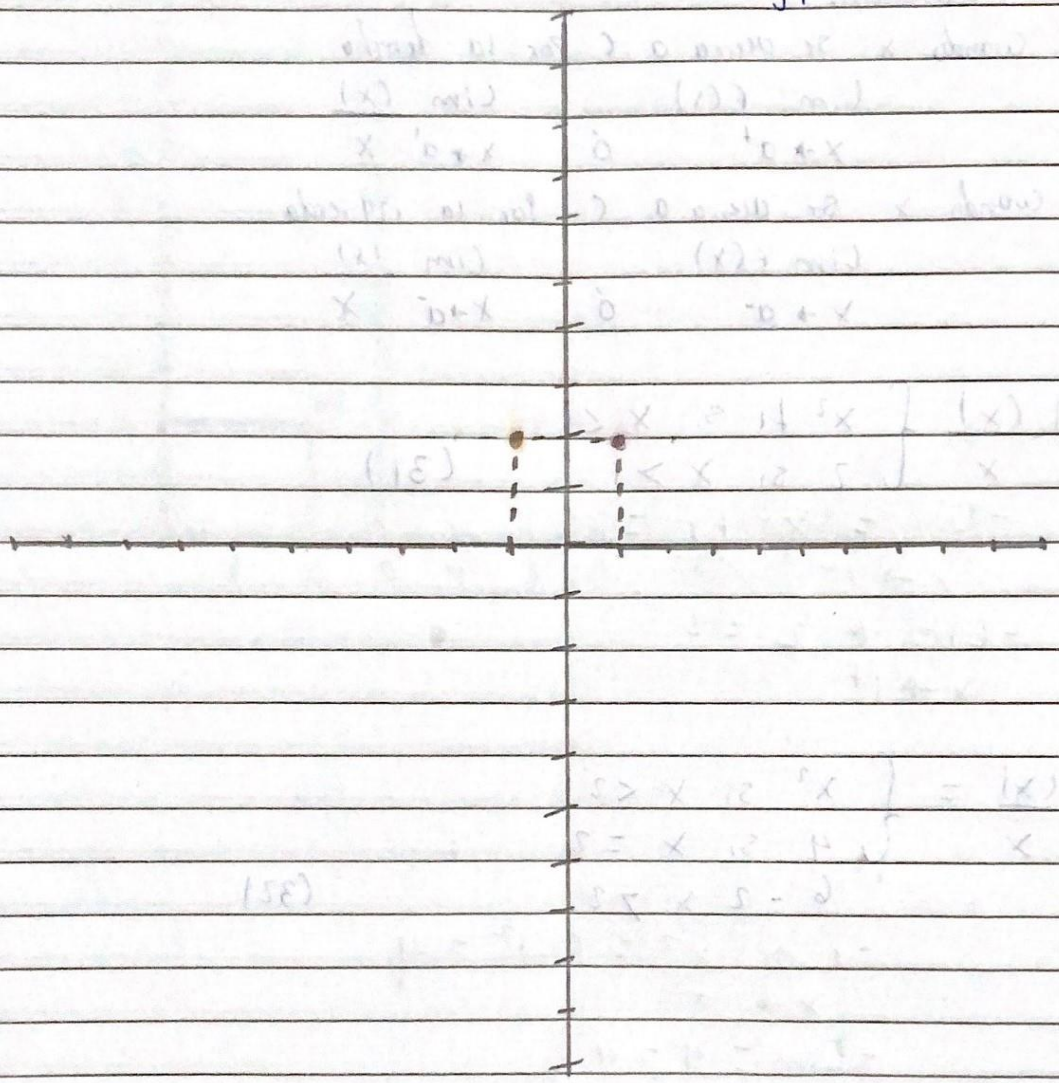
- $f(x) \quad \frac{(x)}{x} = \begin{cases} x^2 & \text{si } x < 2 \\ 4 & \text{si } x = 2 \\ 6 - 2x & > 2 \end{cases}$ (32)

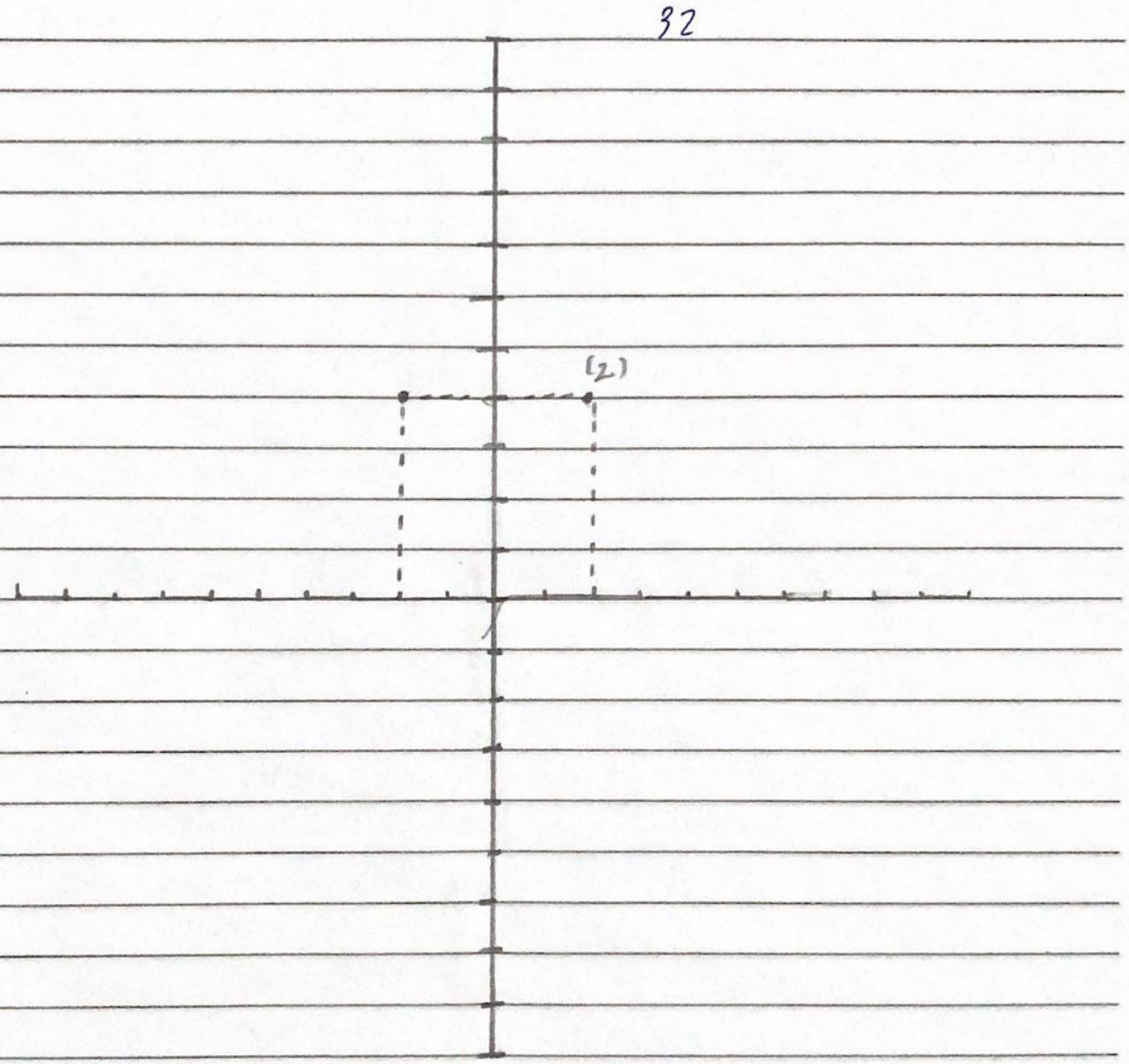
$$-\lim_{x \to 2^-} = x^2 = (2)^2 = 4$$

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

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

31

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