Actividad: Poniendo limites

Materia: Biomatematicas

Alumno: Martín Mar Calderón

Grado: 2°

Grupo: “C”

Catedrático: Rosvani Margine Morales Irecta

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

Actividades realizadas en clase

08/02/22

LAS MATEMATICAS Y LA BIOLOGÍA

Matematicas: Ciencia que estudia las propiedades de los números y las relaciones que se establecen entre ellos

Biologia: Ciencia que estudia la estructura de los seres vivos y de sus procesos vitales

Biomatematicas: Uso de herramientas de las matematicas para el análisis de cuestiones y temas de la biologia

- Se trata de una disciplina científica que también recurre a la utilización de conceptos matemáticas para el estudio de asuntos de las ciencias

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

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

$$\lim x^2 = (2)^2 = 4$$

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

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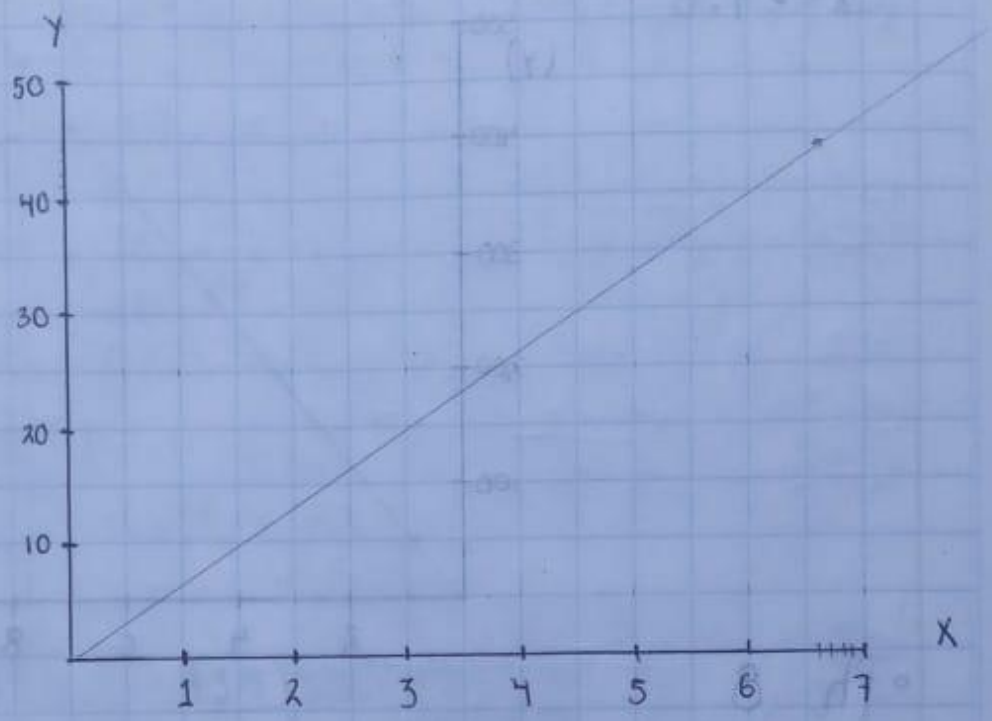
- Ph 6.6

$\lim_{x \to 6.6} x^2$

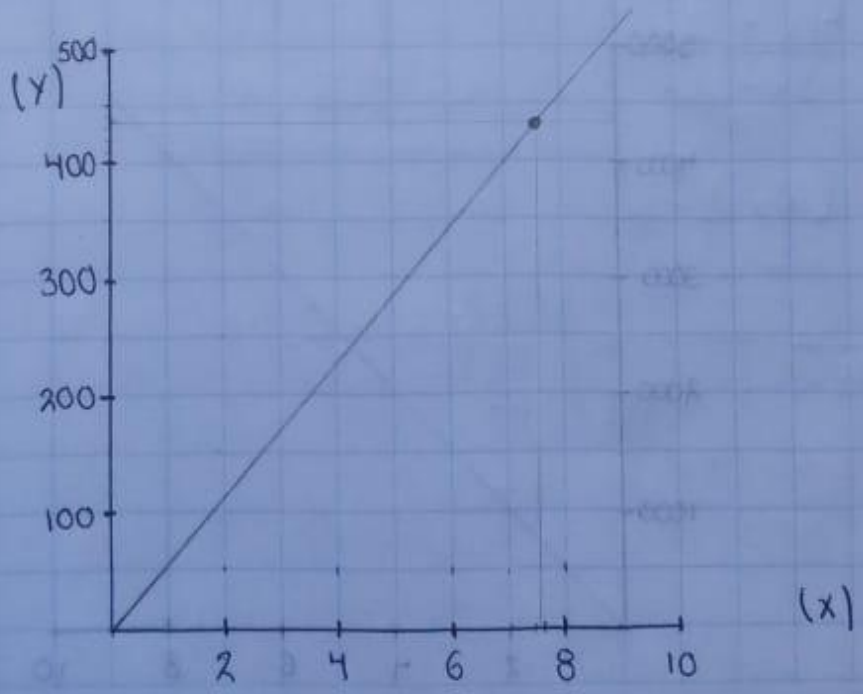
$\lim x^2 = (6.6)^2 = 43.56$



- Ph 7.6

$\lim_{x \to 7.6} x^3$

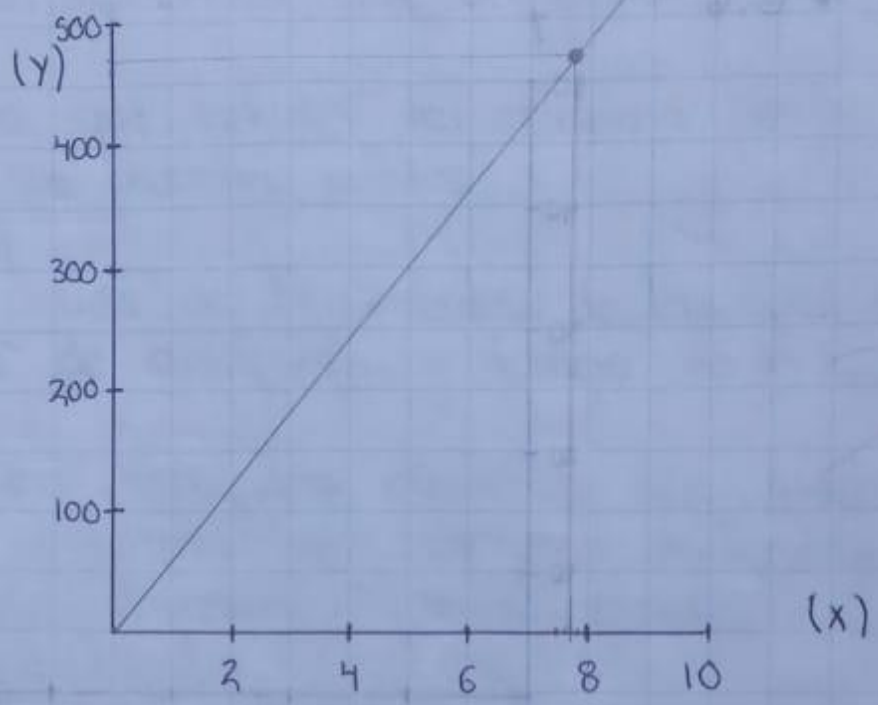
$\lim x^3 = (7.6)^3 = 438.97$



• Ph 7.8

$\lim_{x \to 7.8} x^3$

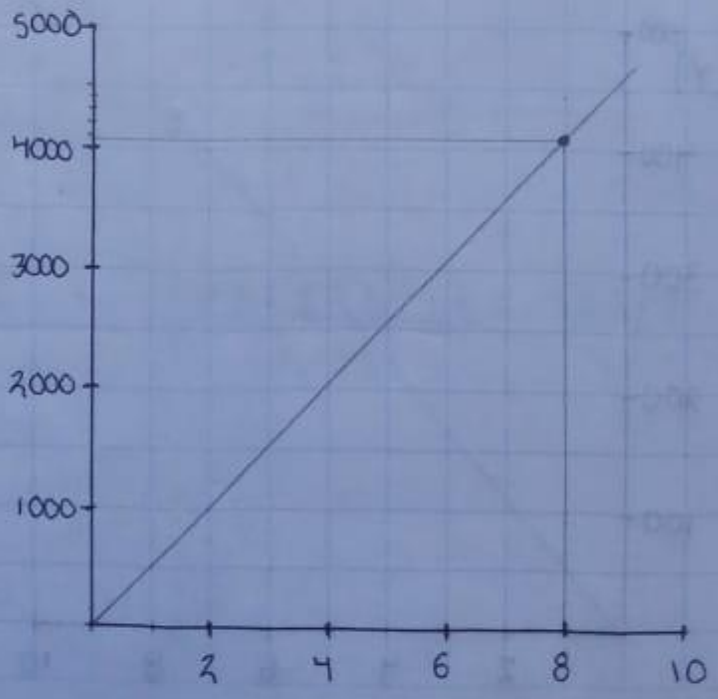
$\lim x^3 = (7.8)^3 = 474.55$



• Ph 8

$\lim_{x \to 7,8} x^4$

$\lim x^4 = (8)^4 = 4096$



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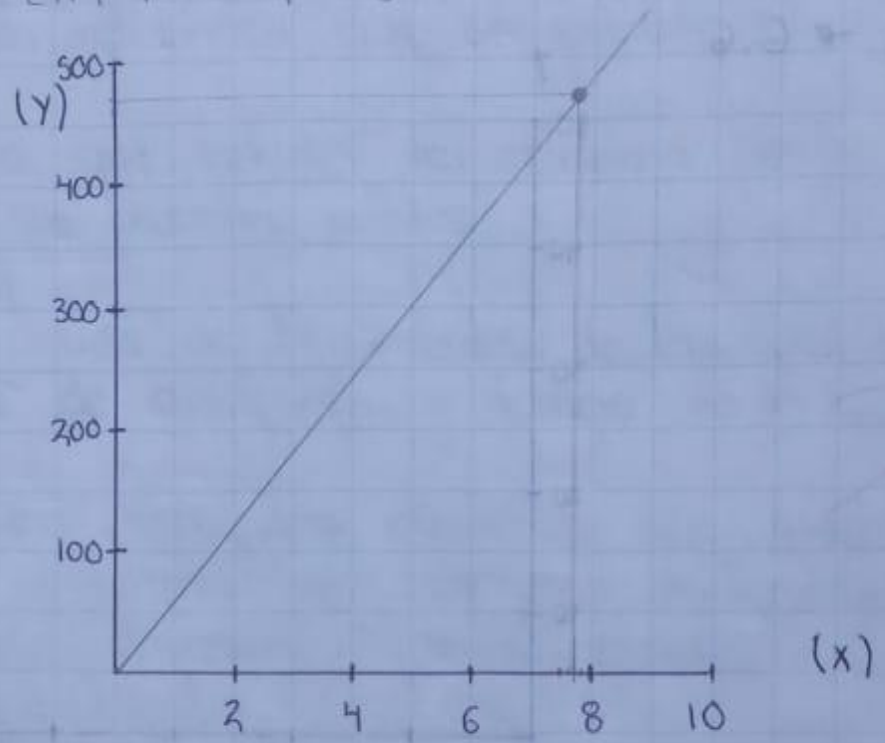

• Ph 8

$\lim_{x \to 7.8} x^4$

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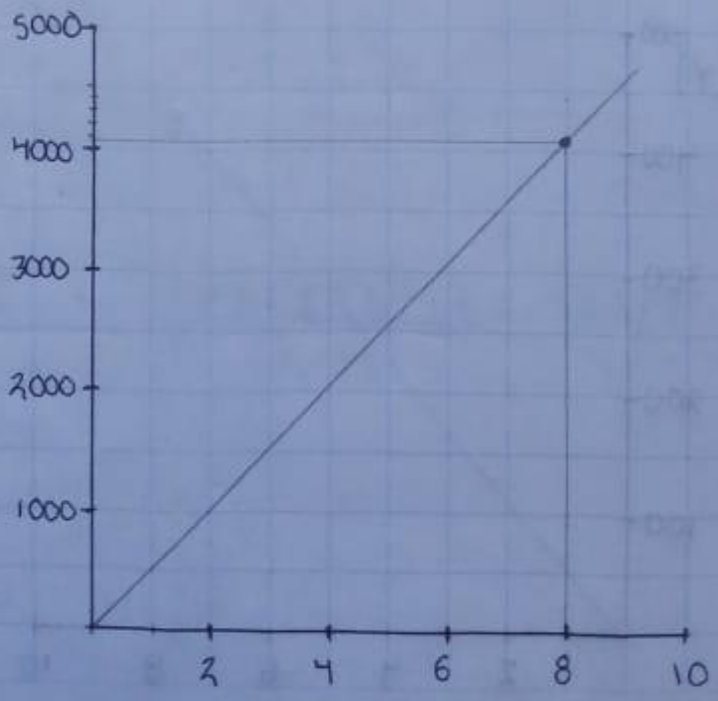

- $\lim_{x \to n} f(x) \pm g(x) = \lim_{x \to 2} f(x) \pm \lim_{x \to 2} g(x) = L \pm M$

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

$$3(3) + 4(3) = 12 + 9 = 21$$

- $\lim_{x \to n} f(x) \cdot g(x) = \lim_{x \to n} f(x) \cdot \lim_{x \to n} g(x) = L \cdot M$

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

$$4(2)^2 \cdot 3(2)^2$$
$$4(4) \cdot 3(4)$$
$$16 \cdot 12 = 192.$$

- $\lim_{x \to n} f(x) + g(x) = \lim_{x \to n} f(x) + \lim_{x \to 2} g(x) = L \div M, M \neq 0$

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

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

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

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

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

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

- $\lim_{x \to n} f(x) \pm g(x) = \lim_{x \to 2} f(x) \pm \lim_{x \to 2} g(x) = L \pm M$

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

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- $\lim_{x \to n} f(x) \cdot g(x) = \lim_{x \to n} f(x) \cdot \lim_{x \to n} g(x) = L \cdot M$

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

$$4(2)^2 \cdot 3(2)^2$$
$$4(4) \cdot 3(4)$$
$$16 \cdot 12 = 192$$

- $\lim_{x \to n} f(x) + g(x) = \lim_{x \to n} f(x) + \lim_{x \to 2} g(x) = L \div M, M \neq 0$

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

$$\lim: \lim_{x \to 2} x^2 - 2$$

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

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

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

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

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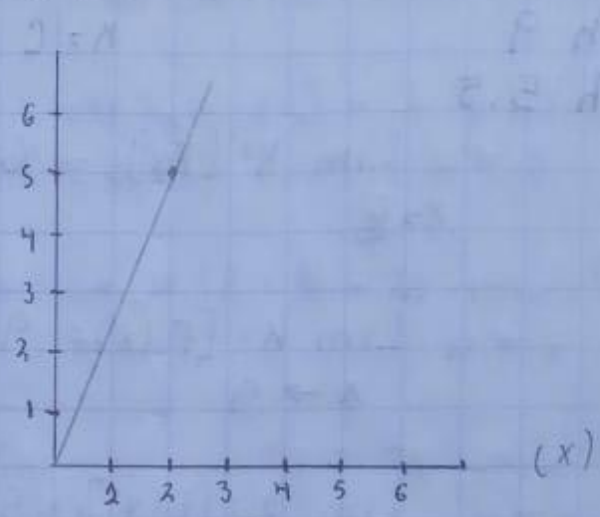
EJERCICIOS

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

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

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

$$= (2+3) = 5$$

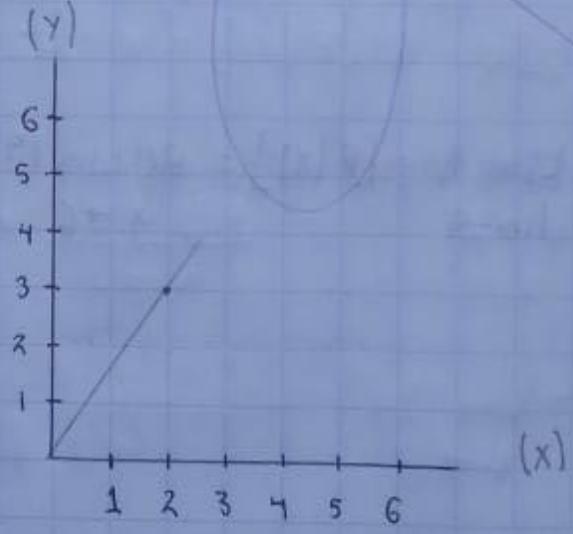


$$\lim_{x \to 2} \frac{x^2 + 5x + 4}{x^2 + 3x - 4}$$

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

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

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



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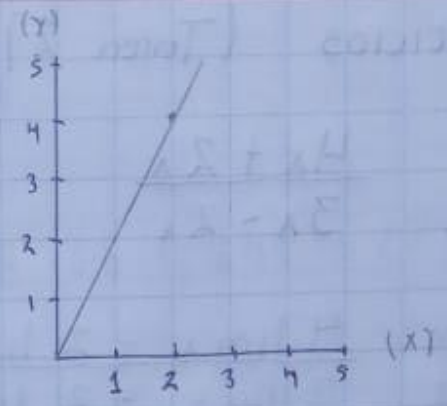
$$\lim_{x \to 2} \frac{x^2 - 4}{x - 2}$$

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

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

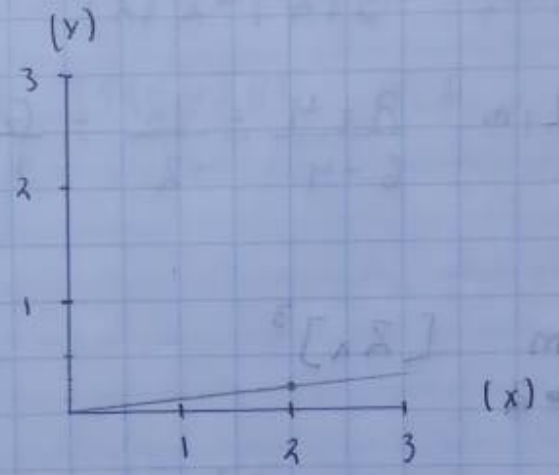


$$\lim_{x \to 2} \frac{x^2 - 5x + 6}{x^2 - 12x + 20}$$

$$= \lim_{x \to 2} \frac{(x-3)(x-2)}{(x-10)(x-2)}$$

$$= \lim_{x \to 2} \frac{(x-3)}{(x-10)}$$

$$= \lim \frac{(2-3)}{(2-10)} = \frac{-1}{-8} = \frac{1}{8} \to 0.12$$



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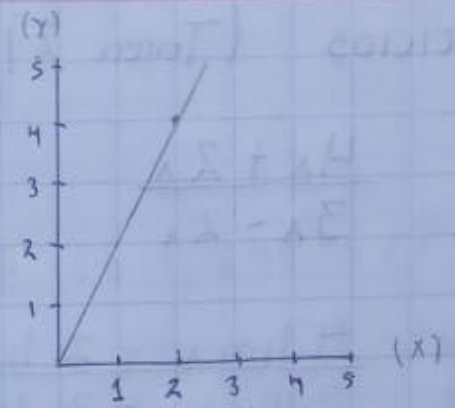
$$\lim_{x \to 2} \frac{x^2 - 4}{x - 2}$$

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

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

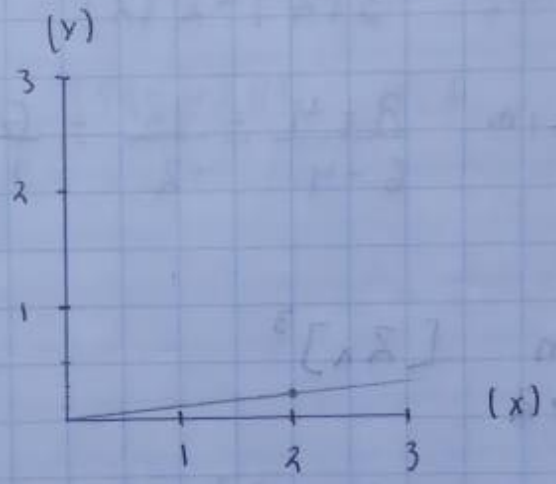


$$\lim_{x \to 2} \frac{x^2 - 5x + 6}{x^2 - 12x + 20}$$

$$= \lim_{x \to 2} \frac{(x-3)(x-2)}{(x-10)(x-2)}$$

$$= \lim_{x \to 2} \frac{(x-3)}{(x-10)}$$

$$= \lim \frac{(2-3)}{(2-10)} = \frac{-1}{-8} = \frac{1}{8} \rightarrow 0.12$$



LIMITES

PH 6 7

PH 9 7,5

Ph 8

¿Sat O^2 hh?

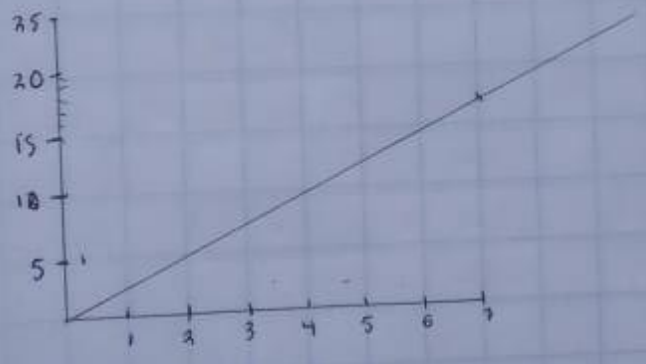
PO^2 mm H^2 35

$\lim_{x \to 7} 35 = 35 \lim(7) = 35(7) = 245 \sim 17$

$\lim_{x \to 7,5} 35 \quad 35 \lim(7,5) = 35(7,5) = 262,5$

$\lim_{x \to 8} 835 \quad 35 \lim(8) = 35(8) = 280 = 5,6$

①



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