

Lista 1 ex 6 a

$$f: \mathbb{R} \rightarrow \mathbb{R}, g: \mathbb{R} \rightarrow \mathbb{R}$$

$$f+g$$

$$h: \mathbb{R} \rightarrow \mathbb{R} \quad h(x) = \max\{f(x), g(x)\}$$

$$h(x) - f(x) \geq 0$$

$$\text{Para cada } x \in \mathbb{R} \quad h(x) - f(x) \geq 0$$

$$\left. \begin{array}{l} f(x) > g(x) \\ f(x) < g(x) \end{array} \right\} \rightarrow h(x) = f(x) : h(x) - f(x) = 0$$

$$\rightarrow h(x) = g(x) : h(x) - f(x) = g(x) - f(x) > 0$$

$$g(x) - f(x) > 0$$

texto 3 sen e cont

lim $\sin(x)$

$$x \rightarrow p$$

$$x$$

$$\downarrow$$

Considere $\exists \epsilon, \exists \delta$

$\rightarrow ?$

$$|x - p| < 2\epsilon$$

$$\frac{|x - p|}{2} < \epsilon$$

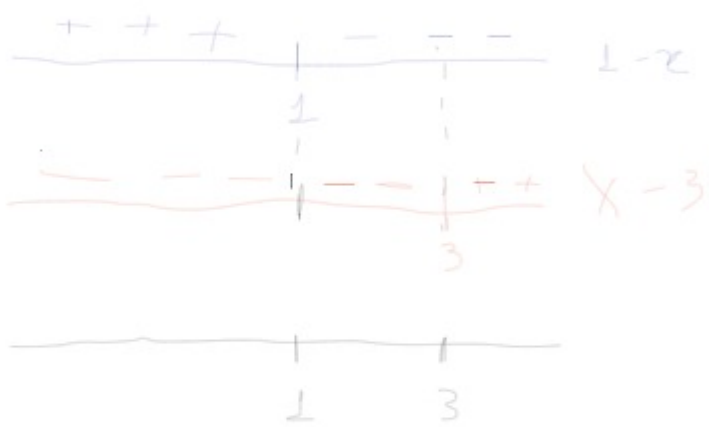
$$\left| \frac{x - p}{2} \right| < \epsilon$$

$$\Downarrow \rightarrow \text{prop do } \epsilon$$

$$|\sin \left| \frac{x-p}{2} \right| | < \left| \frac{x-p}{2} \right|$$

Lista 1

$$4 \text{ f) } |x-3| - |1-x| < 0$$



$$x < 1: -(x-3) - (1-x) = 2 > 0$$

$$\begin{aligned} 1 \leq x \leq 3: -(x-3) - (-1-x) &= -x+3 + 1-x \\ &= -2x+4 \end{aligned}$$

$$-2x+4 < 0$$

$$4 < 2x$$

$$\Downarrow$$

$$2 < x$$

$$x > 2$$

$$[1, 3] \cap]2, \infty[$$

$$=]2, 3]$$

$$x > 3:$$