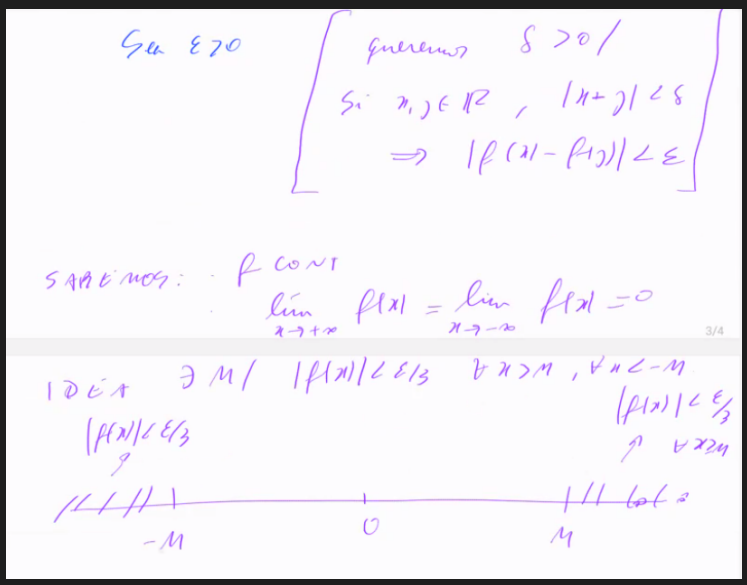
**12.** Sea $f : \mathbb{R} \to \mathbb{R}$ continua tal que

$$\lim_{x \to -\infty} f(x) = \lim_{x \to +\infty} f(x) = 0.$$

Probar que $f$ es uniformemente continua en $\mathbb{R}$.




$x, y > M \quad |f(x) - f(y)| \leq |f(x)| + |f(y)| < \varepsilon/3 + \varepsilon/3 < \varepsilon$

Falta ver los bordes.