A Sample Beamer Presentation

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June 24, 2015

Presentation Outline

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A Counterexample

Consider the function

$$f(x) = \begin{cases} x^2 \sin(1/x), & \text{if } x \neq 0 \\ 0, & \text{if } x = 0 \end{cases}$$

Let's see what $f'(0)$ is.

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Since $-h \leq h\sin(1/h) \leq h$ and $\lim_{h\to 0}(-h) = \lim_{h\to 0}(h) = 0$, the Squeeze Theorem says $f'(0) = 0$.