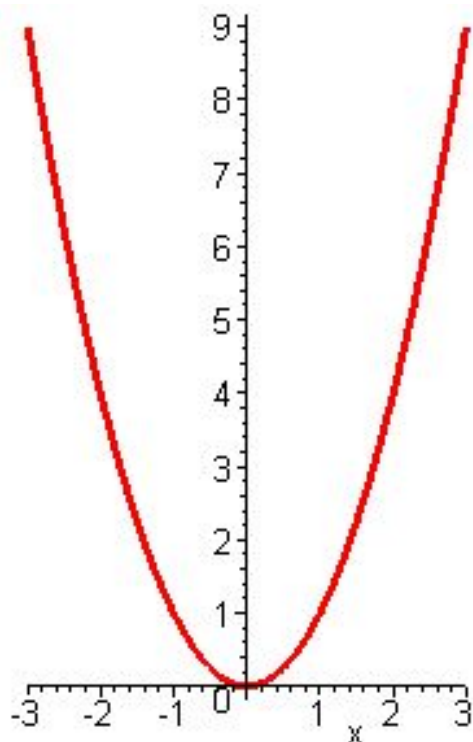
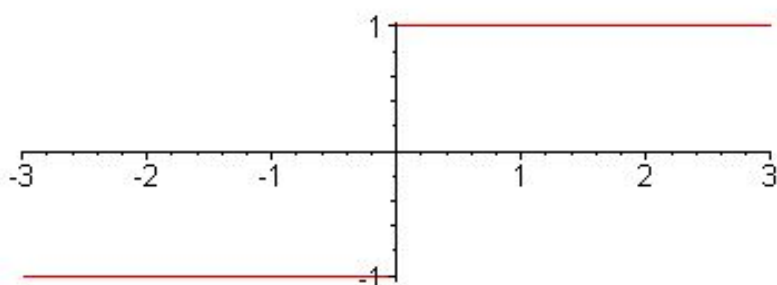


Anschauliche Vorüberlegungen zum Grenzwertbegriff:

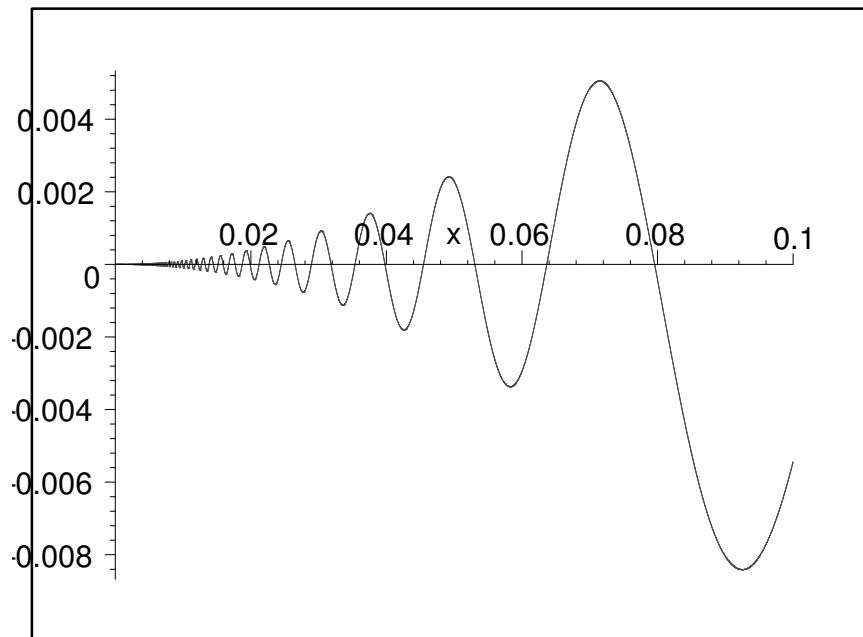
$$f : x \mapsto x^2$$



$$f : x \mapsto \begin{cases} -1 & \text{falls } x < 0 \\ 0 & \text{falls } x = 0 \\ 1 & \text{falls } x > 0 \end{cases}$$



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



$$f : x \mapsto \begin{cases} 2x \sin(1/x) - \cos(1/x) & \text{falls } x \neq 0 \\ 0 & \text{falls } x = 0 \end{cases}$$

