

4.1 cont:

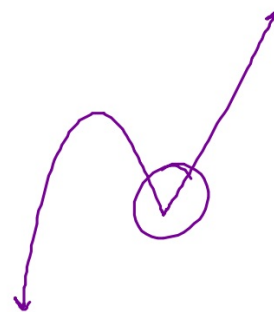
Ex: Find extreme values of  $f(x) = \begin{cases} 5-2x^2 & x \leq 1 \\ x+2 & x > 1 \end{cases}$

$$f'(x) = \begin{cases} -4x & x < 1 \\ 1 & x > 1 \end{cases}$$

$$\begin{array}{cc} \text{und} & \text{zero} \\ x=1 & x=0 \end{array}$$

$$f(0) = 5 - 2(0)^2 = 5 \text{ local max}$$

$$f(1) = 5 - 2(1)^2 = 3 \text{ local min}$$



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