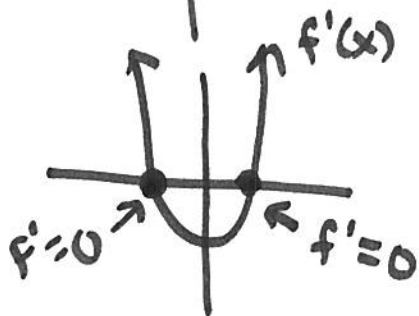
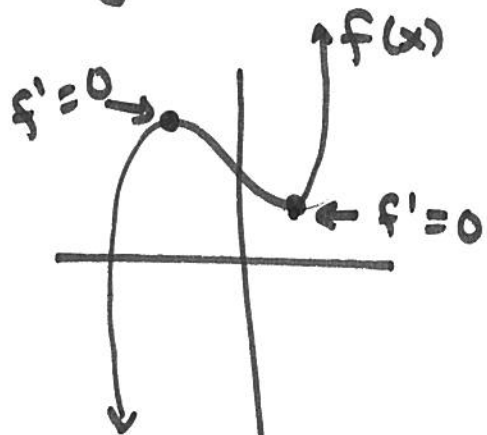


4.1

Using graphing calculator to find critical #s and extrema.



ex: $y = x^3 - 2x + 4$



- ① graph the function
- ② look @ $f'(x) = 0$ or DNE to get critical #s
- ③ ID max/mins

crit #s: $x = -.816, x = .816$

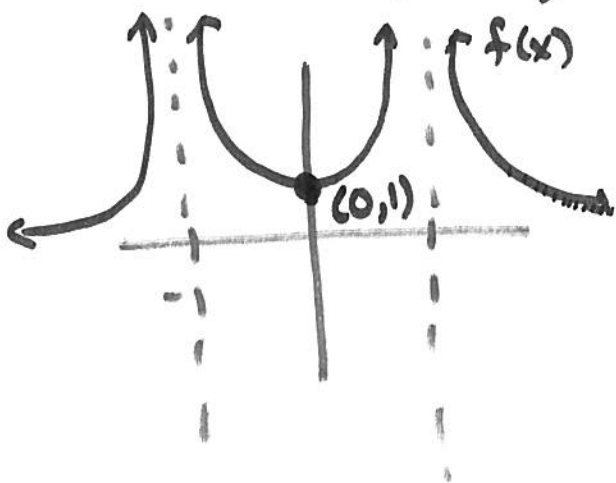
rel. max: $(-.816, 5.089)$

rel min: $(.816, 2.911)$

abs max: none

abs min: none

ex: $f(x) = \frac{1}{\sqrt[5]{(1-x^2)^2}}$



crit #s: $x=0$ (labeled $f'=0$), $x=-1$, $x=1$ (labeled f' DNE)

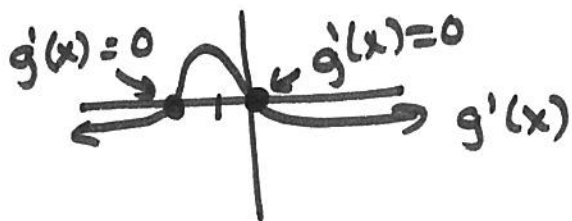
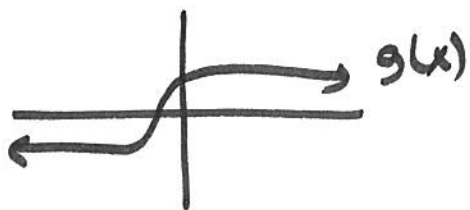
rel max: none

rel. min: $(0, 1)$

abs max: none

abs min: none

ex: $g(x) = \frac{x+1}{x^2+2x+2}$



crit #s: $x=0, x=-2$

rel. max: $(0, .5)$

rel. min: $(-2, -.5)$

abs max: $(0, .5)$

abs min: $(-2, -.5)$