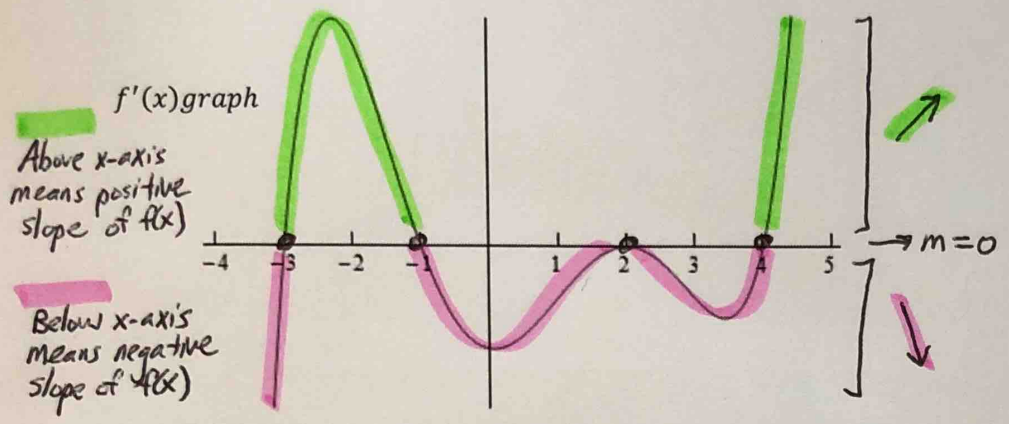
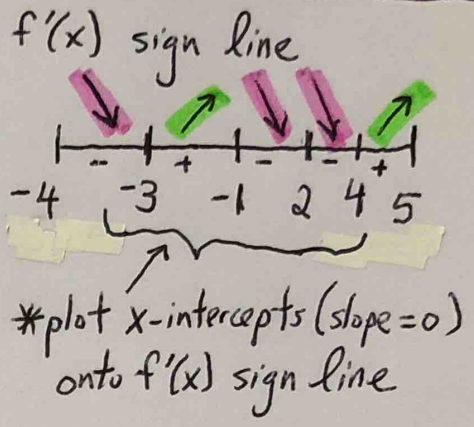
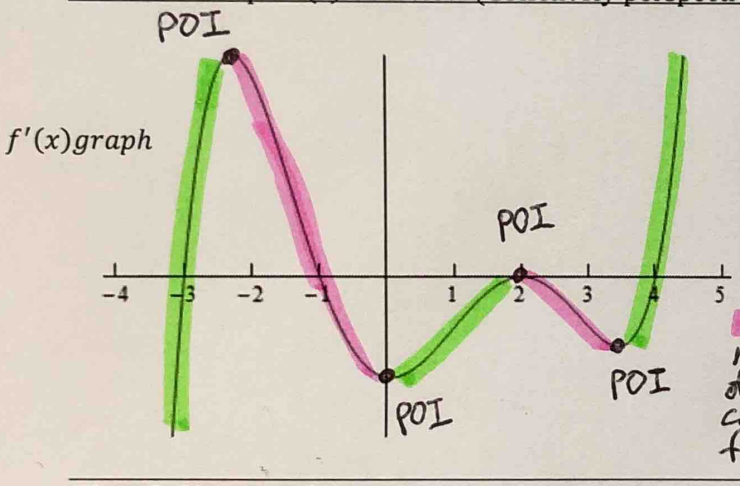
Key

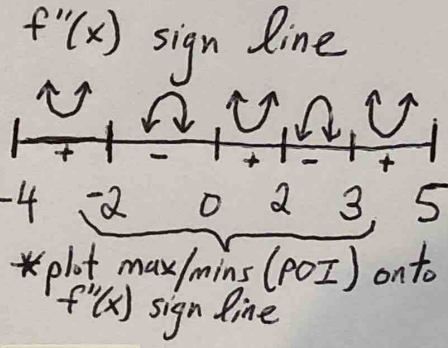
Derivative Graph f′(x) Overview (**Slope** perspective of f(x))



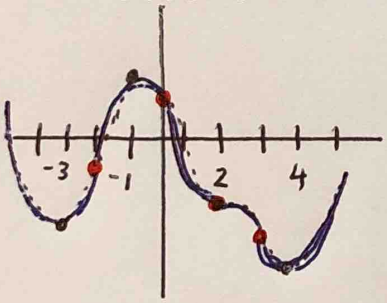


Derivative Graph f′(x) Overview (**Concavity** perspective of f(x))

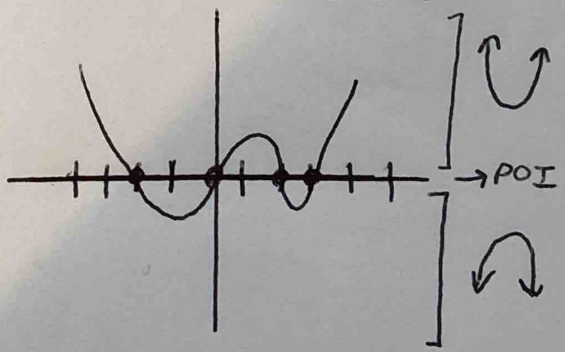




Sketch $f(x)$ graph (based on slope/concavity information)



Sketch $f''(x)$ graph



Identify the following information about $f(x)$:

Relative minimum(s) (x-value) $x=-3, x=4$ Relative maximum(s) (x-value) $x=-1$

Interval increasing: $(-3,-1) \cup (4,5)$ Interval decreasing: $(-4,-3) \cup (-1,2) \cup (2,4)$

Point(s) of Inflection (x-value) $x=-2, 0, 2, 3$

Intervals concave up: $(-4,-2) \cup (0,2) \cup (3,5)$ Intervals concave down: $(-2,0) \cup (2,3)$