

September 25

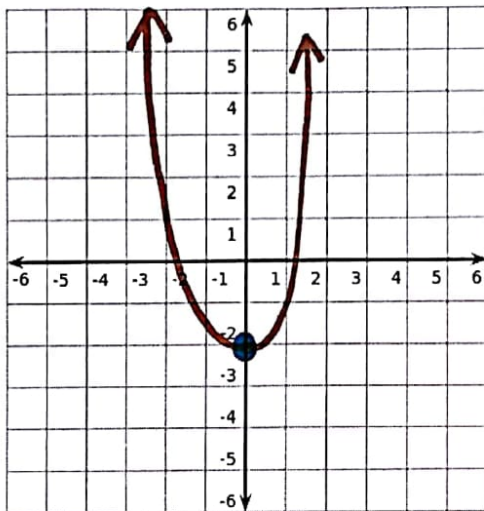
Extrema and Intervals for Increasing/Decreasing

rema: "turning points"

absolute minimum/maximum - the absolutely lowest/highest point the graph reaches. No other points are lower/higher.

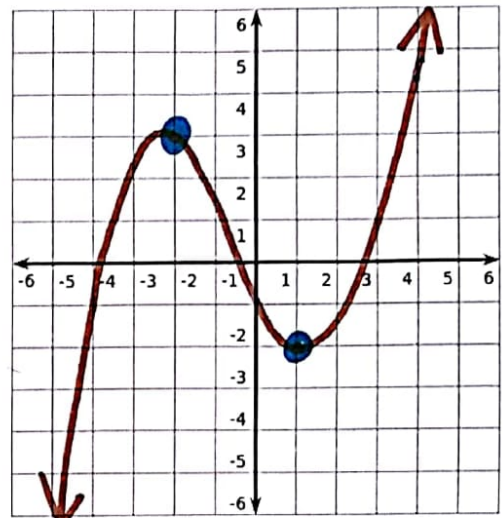
relative minimum/maximum - low/high point in that area. Other points elsewhere are lower/higher.

EX1.



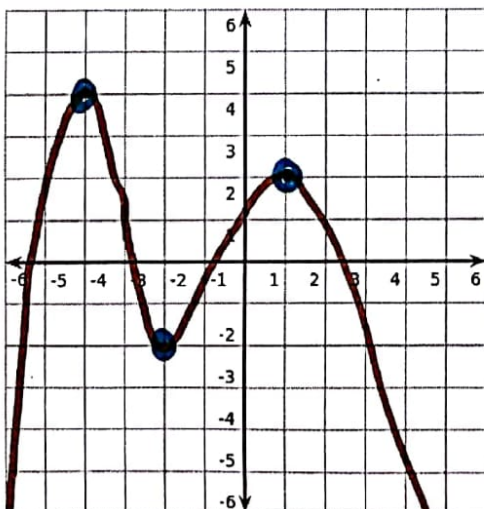
$(0, -2)$ absolute minimum

EX2.



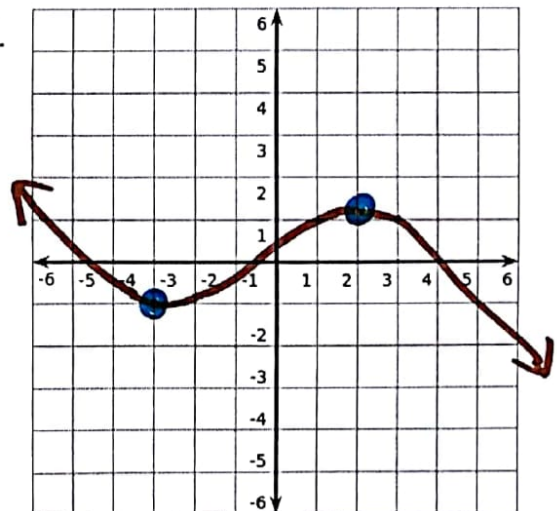
$(-2, 3)$ relative maximum
 $(1, -2)$ relative minimum

EX3.



$(-4, 4)$ absolute maximum
 $(-2, -2)$ relative minimum
 $(1, 2)$ relative maximum

EX4.

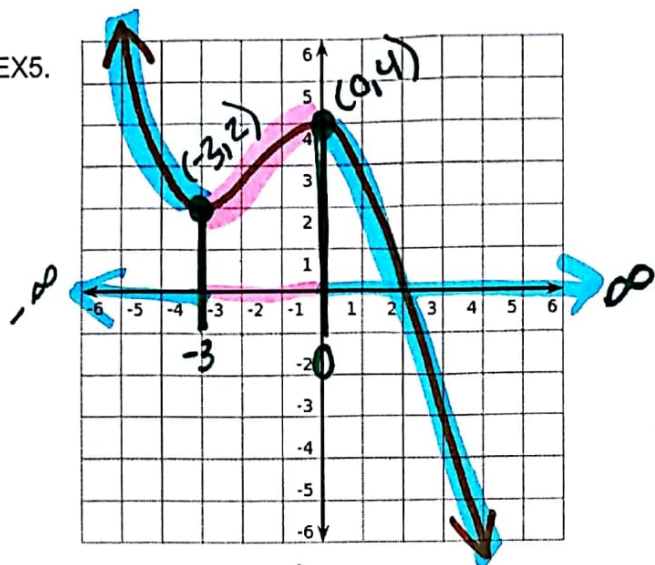


$(-3, -1)$ relative minimum
 $(2, 1)$ relative maximum

Intervals for Increasing/Decreasing

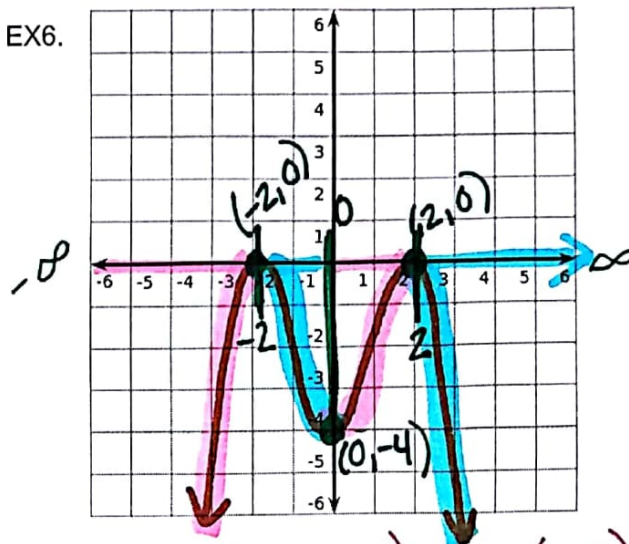
Start by finding the extrema. Use the x-coordinates only to write the intervals!!

EX5.



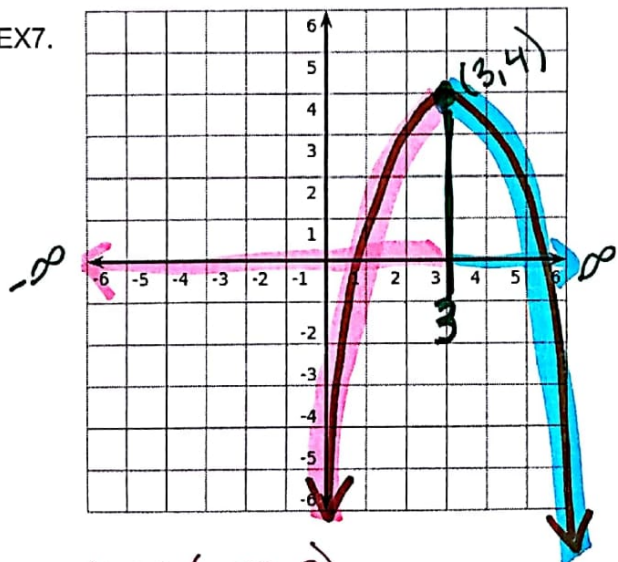
inc: $(-3, 0)$
dec: $(-\infty, -3)$ and $(0, \infty)$

EX6.



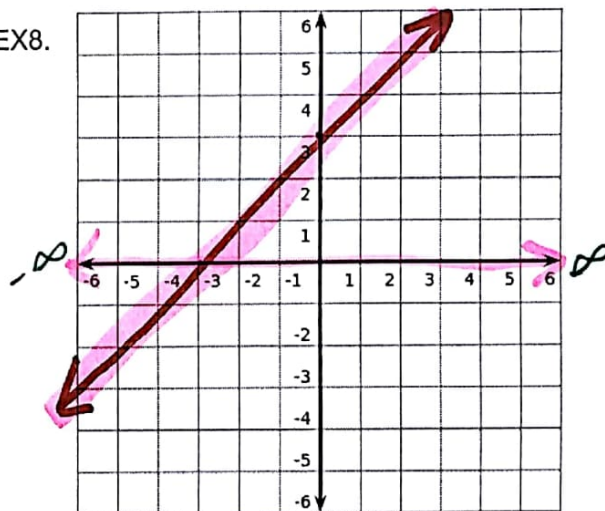
inc: $(-\infty, -2)$ and $(0, 2)$
dec: $(-2, 0)$ and $(2, \infty)$

EX7.



inc: $(-\infty, 3)$
dec: $(3, \infty)$

EX8.



inc: $(-\infty, \infty)$
dec: