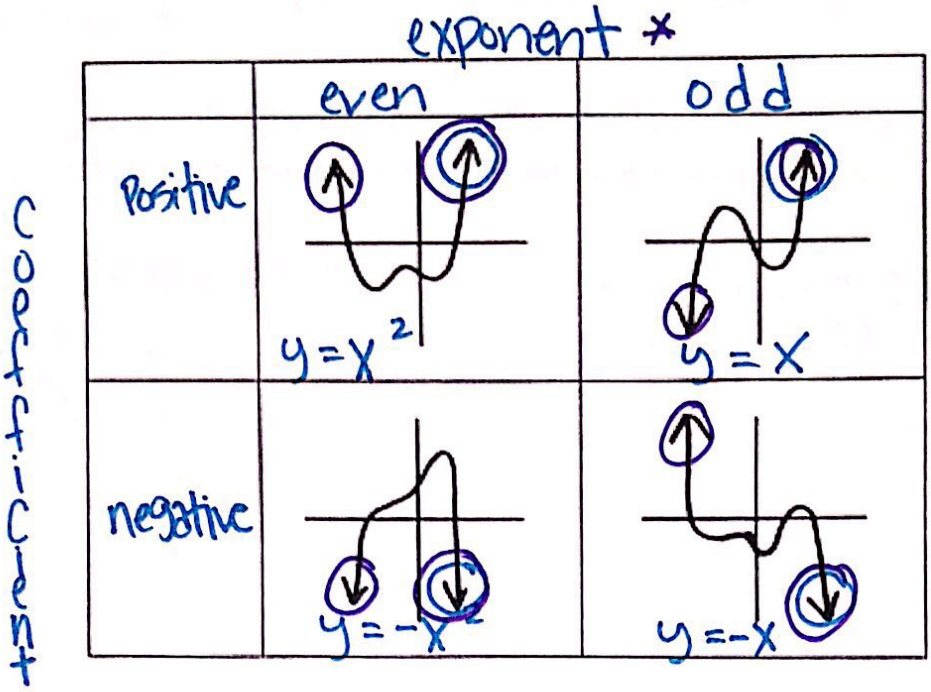
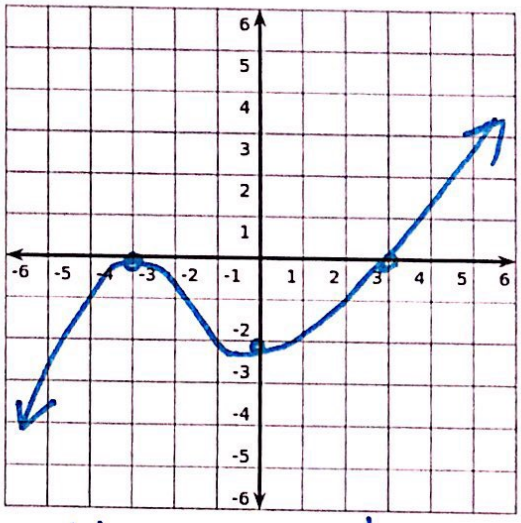
End Behavior, Extrema, and Intervals for Increasing/Decreasing

End Behavior:



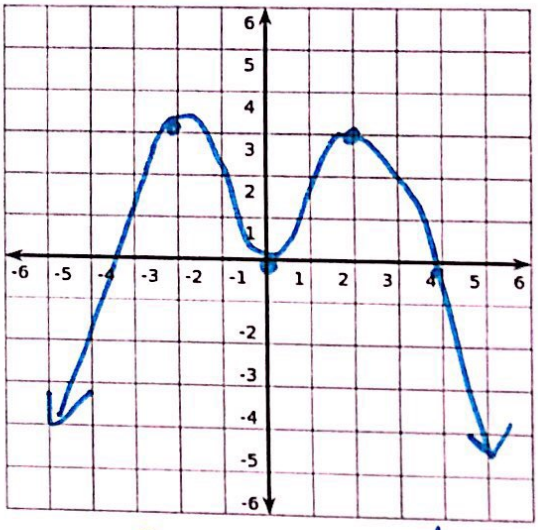
State the type of exponent and coefficient of the leading term for the following graphs.

EX1.



odd exponent
positive coefficient

EX2.



even exponent
negative coefficient

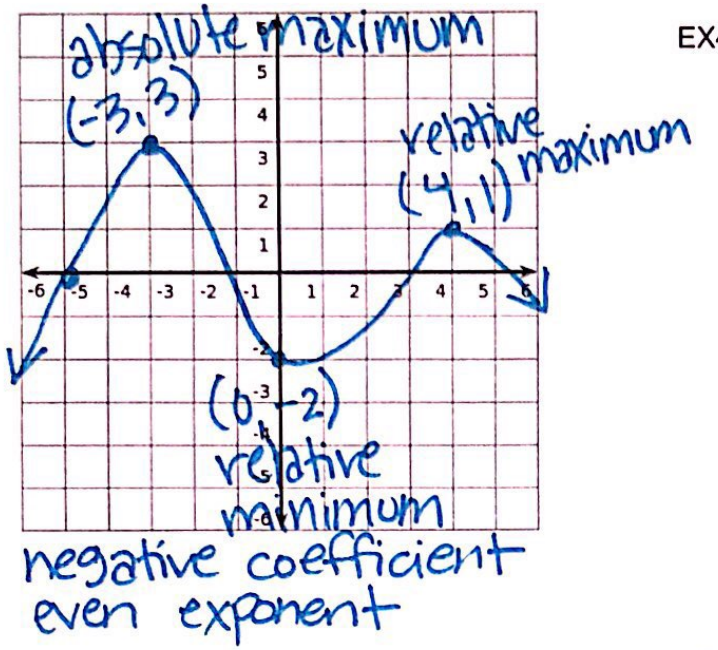
Extrema:

absolute minimum/maximum – absolute highest/lowest point on the graph

relative minimum/maximum – highest/lowest point on an area of the graph

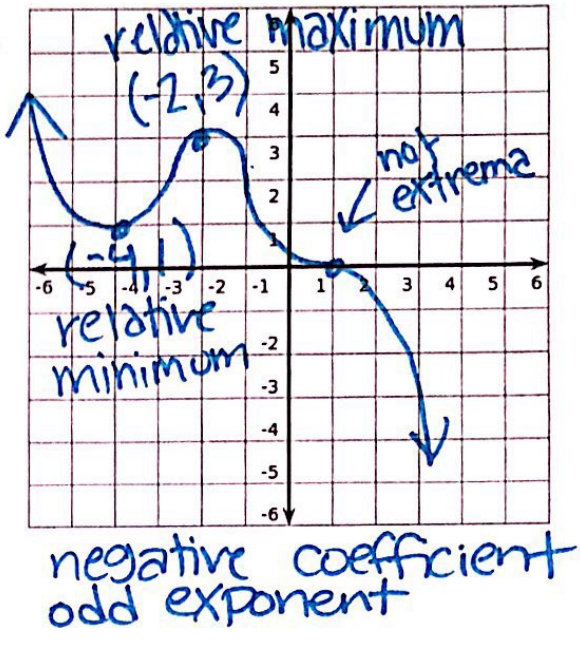
For the following graphs, state the maximums and minimums and if they are absolute or relative.

EX3.



negative coefficient
even exponent

EX4.



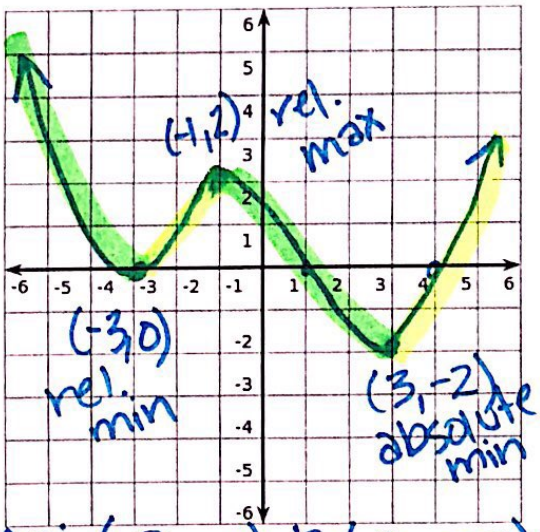
negative coefficient
odd exponent

Intervals for Increasing/Decreasing like domain

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

State the intervals of increasing and the intervals of decreasing for the following graphs

EX5.

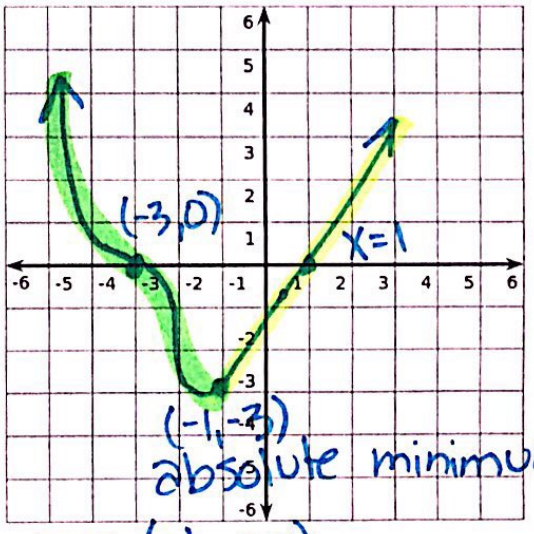


Inc: $(-3,-1) \cup (3,\infty)$

dec: $(-\infty,-3) \cup (-1,3)$

even exponent, positive coefficient

EX6.



Inc: $(-1,\infty)$

Dec: $(-\infty,-1)$

even exponent
positive coefficient