

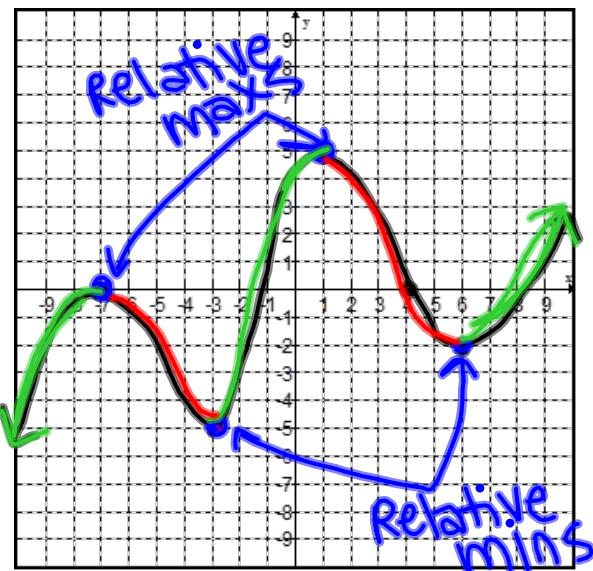
# Features of Polynomials

## Essential Question

What is the difference between relative  
and absolute extrema?

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+ values

Increasing + slope  
 $(-\infty, -7) \cup (-3, 1) \cup (6, \infty)$

Decreasing - slope  
 $(-7, -3) \cup (1, 6)$



## Extrema

high or low points on a graph

ex.  $4x^3 + x^2 - x$  <sup>degree -1</sup>  
<sub>2</sub> max # extrema

## Absolute Extrema

THE highest (maximum) or THE lowest (minimum) on a graph

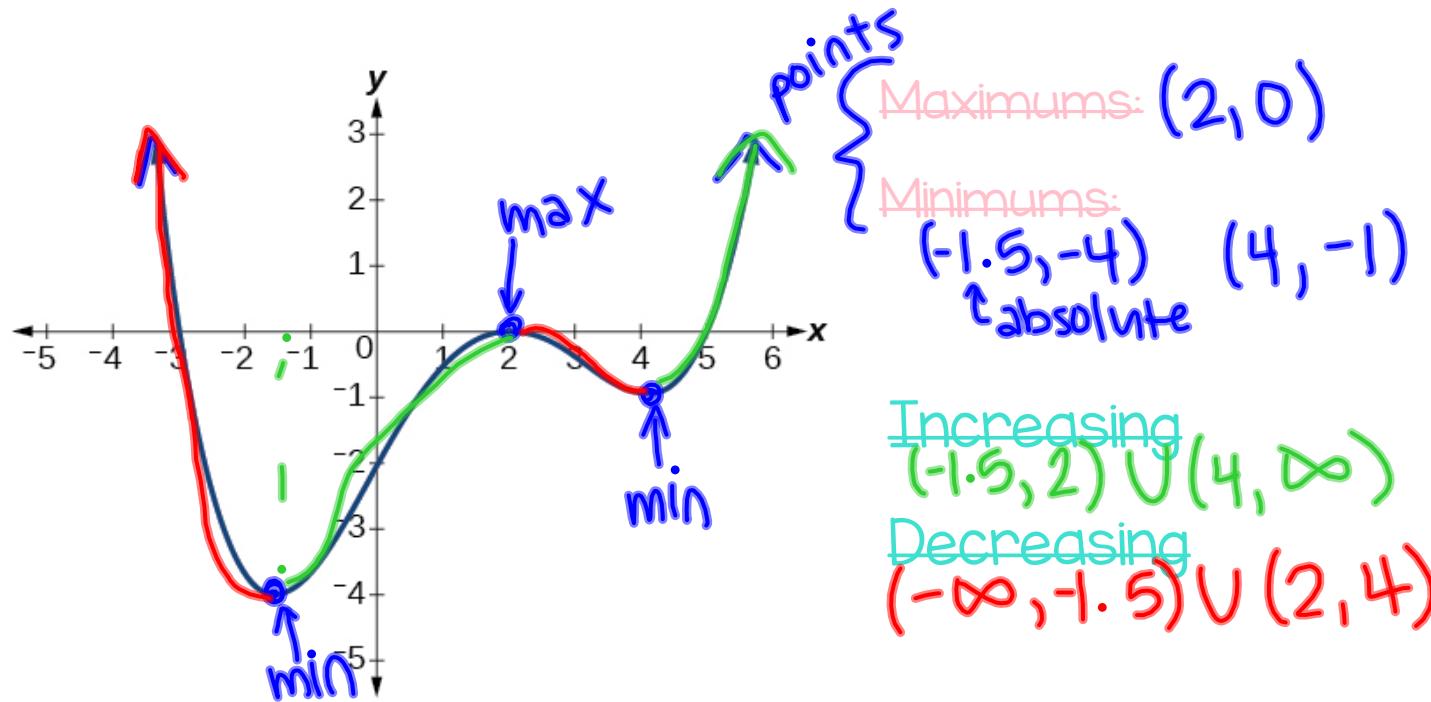
## Relative (Local) Extrema

The highest (max) or lowest (min) in an area on a graph

ex. Max:  $(-7, 0)$   $(1, 5)$   
 mins:  $(-3, -5)$   $(6, -2)$

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