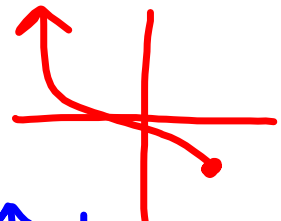


# Characteristics of Polynomial Graphs

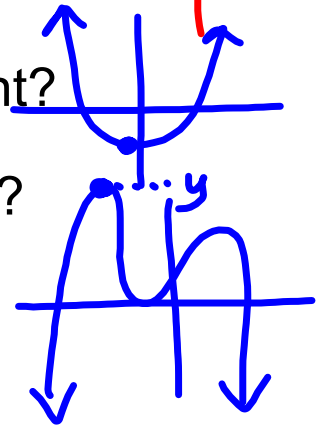
**Domain:** Arrow on left or starting point?

*x-values*  $-\infty$  |  $x = -5$   
 lead Arrow on right or ending point?  
 left to right  $+\infty$   $x = \#$

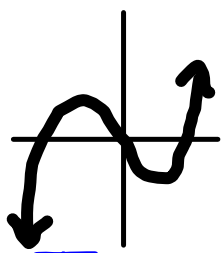


**Range:** Arrow going down or lowest point?

*y-values*  $-\infty$   $y = \#$   
 read Arrow going up or highest point?  
 bottom to top  $+\infty$   $y = \#$



## Inequality format verse interval notation



Inequality

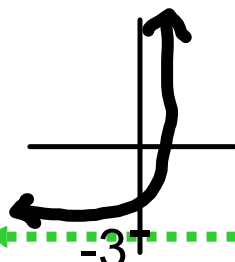
$$D: -\infty < x < \infty$$

$$R: -\infty < y < \infty$$

Interval

$$D: (-\infty, \infty)$$

$$R: (-\infty, \infty)$$



Inequality

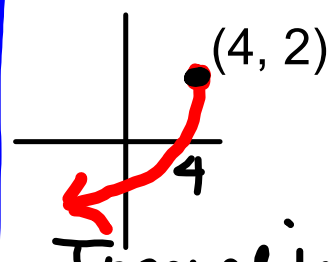
$$D: -\infty < x < \infty$$

$$R: -3 < y < \infty$$

Interval

$$D: (-\infty, \infty)$$

$$R: (-3, \infty)$$



Inequality

$$D: -\infty < x \leq 4$$

$$R: -\infty < y \leq 2$$

Interval

$$D: (-\infty, 4]$$

$$R: (-\infty, 2]$$

**End behaviors:** As the graph travels left, it goes up, down or towards an asymptote? As it travels right, it goes up, down or towards an asymptote?

**x-intercepts/zeros:** Plug in zero for y and solve.

**y-intercept:** Plug in zero for x and solve.

$(0, y)$