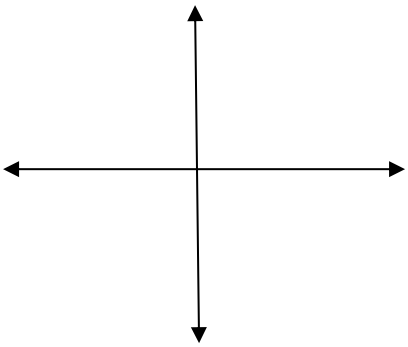
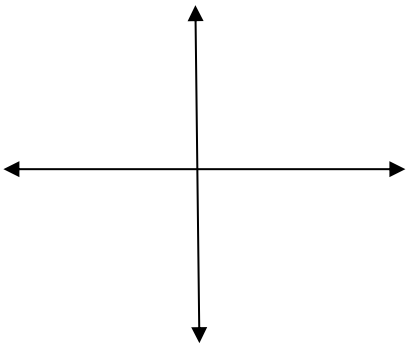
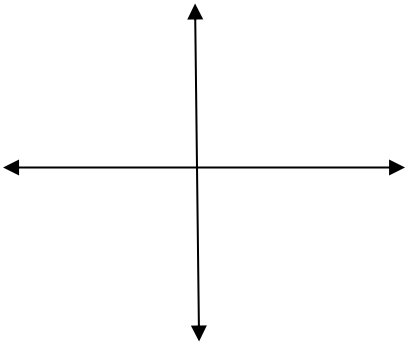
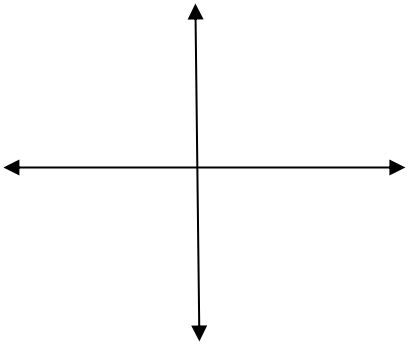
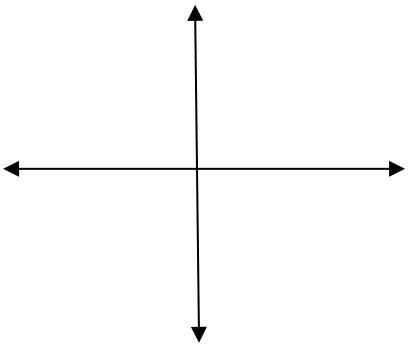
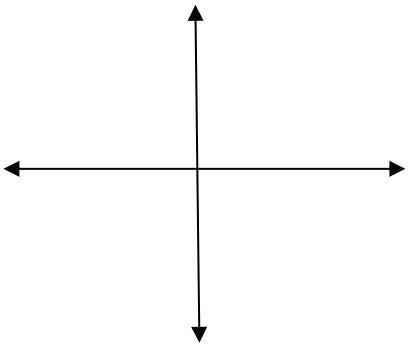
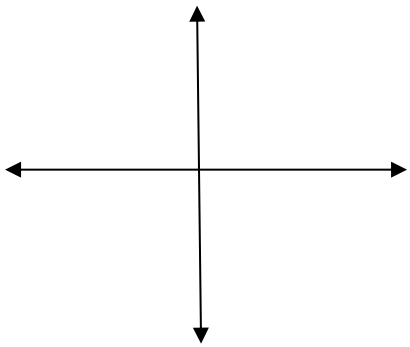
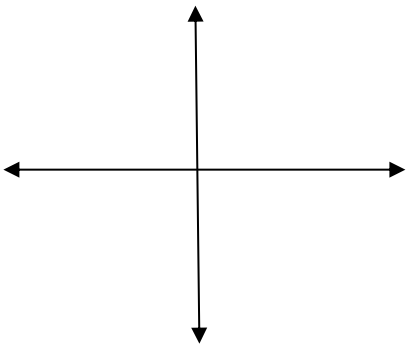
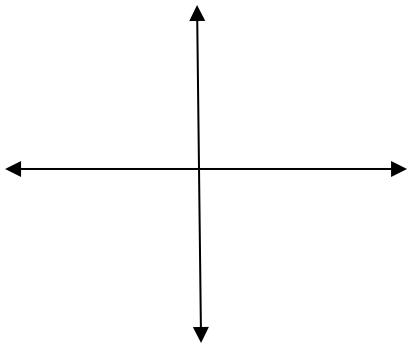
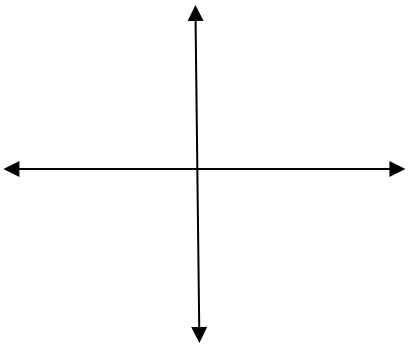
Polynomial Functions

Using a graphing calculator **sketch** the graph of each polynomial function. State the degree and then number of turns.

$f(x) = 3x + 2$  Degree___ Number of turns___	$f(x) = -2x - 1$  Degree___ Number of turns___
$f(x) = -x^2 + 3$  Degree___ Number of turns___	$f(x) = x^2 + 3x - 4$  Degree___ Number of turns___
$f(x) = -x^3 + 2x - 1$  Degree___ Number of turns___	$f(x) = x^3 - 2x - 1$  Degree___ Number of turns___

Behavior of Polynomial Notes Activity Date _____

$f(x) = -x^4 + x^3 + 5x^2 - x - 6$  Degree____ Number of turns____	$f(x) = x^4 - 3x^2 + 2$  Degree____ Number of turns____
$f(x) = x^5 - 6x^3 - x^2 + 8x + 4$  Degree____ Number of turns____	$f(x) = -x^5 - 5x^4 - 5x^3 + 5x^2 + 6x$  Degree____ Number of turns____

What is the relationship between the degree of the polynomial and the number of turns in the graph?

What does the sign of the term with the largest degree tell you about the graph?

What similarities do the even degree functions share?

What similarities do the odd degree functions share?