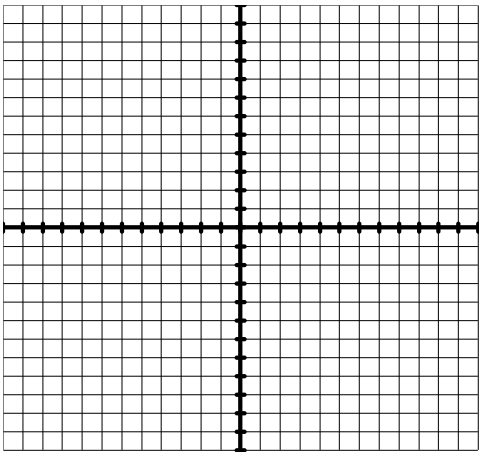
Honors Algebra II **Name: _____ Hour: _____**

Use your graphing calculator to complete the tasks:

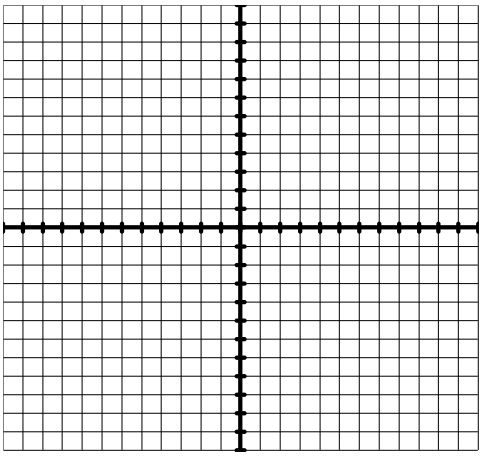
- Sketch a graph
- Fill in the information **(L.C.- leading coefficient, # T.P.- # of turning points)**

$f(x) = x^2 - x - 6$

Degree: _____
Type: _____
L.C.: _____
y-int.: _____
T.P.: _____
x –int._____



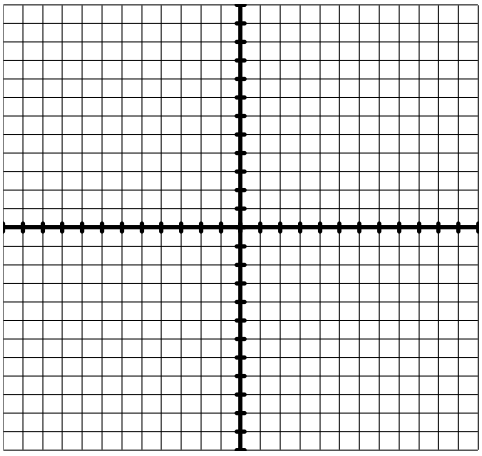
$g(x) = x^2 - 4x + 4$



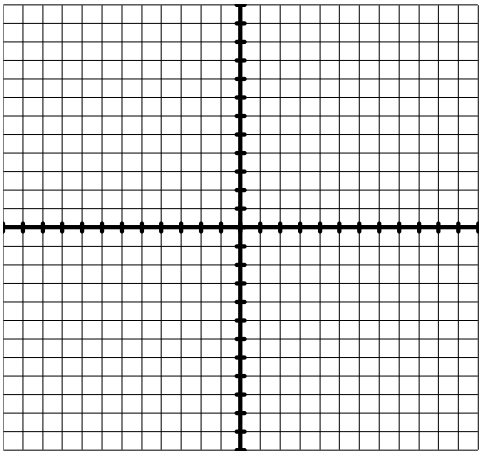
Degree: _____
Type: _____
L.C.: _____
y-int.: _____
T.P.: _____
x –int._____

$y = x^2 + 6x + 9$

Degree: _____
Type: _____
L.C.: _____
y-int.: _____
T.P.: _____
x –int._____



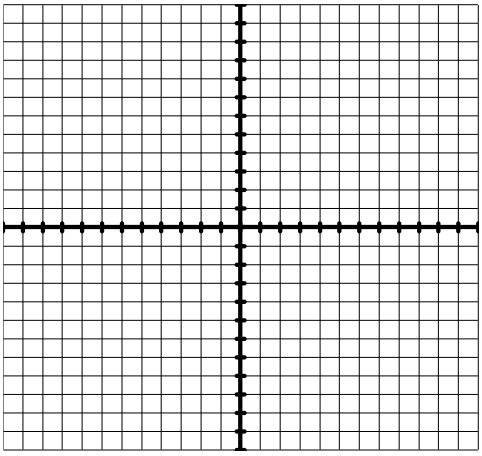
$h(x) = -x^2 - 3x + 4$



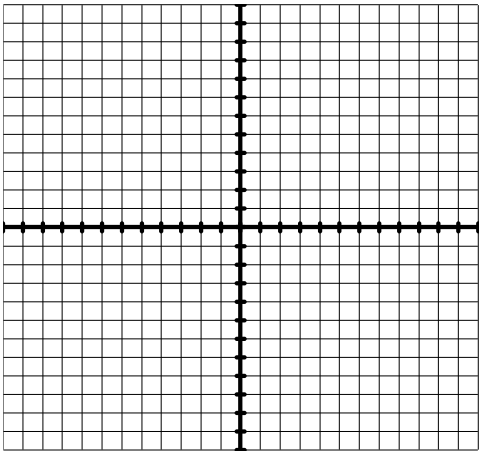
Degree: _____
Type: _____
L.C.: _____
y-int.: _____
T.P.: _____
x –int._____

$P(x) = x^3 - 3x - 2$

Degree: _____
Type: _____
L.C.: _____
y-int.: _____
T.P.: _____
x –int._____



$y = -.5x^3 + 1.5x + 1$



Degree: _____
Type: _____
L.C.: _____
y-int.: _____
T.P.: _____
x –int._____

$f(x) = x^4 - 5x^2 + 4$

Degree: _____

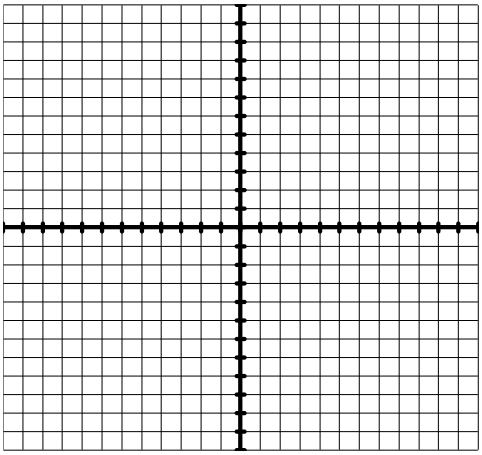
Type: _____

L.C.: _____

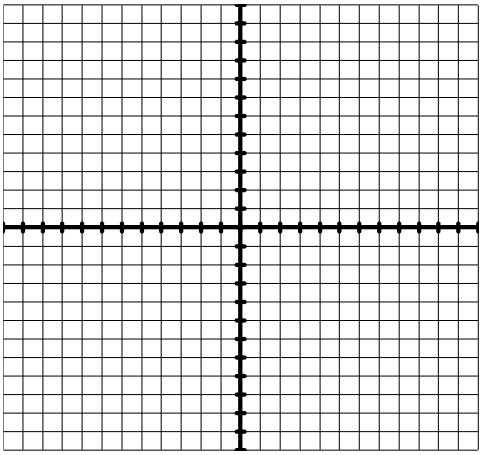
y-int.: _____

T.P.: _____

x –int._____



$g(x) = -1.8x^4 - 3x^3 + 5x^2 + 2x - 2$



Degree: _____

Type: _____

L.C.: _____

y-int.: _____

T.P.: _____

x –int._____

$h(x) = 3x^5 - 4x^4 + x^3 - 6x^2$

Degree: _____

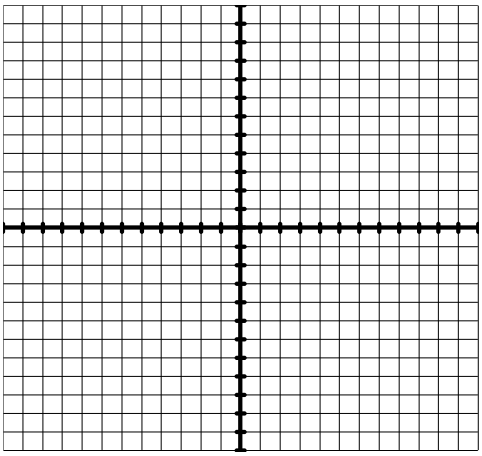
Type: _____

L.C.: _____

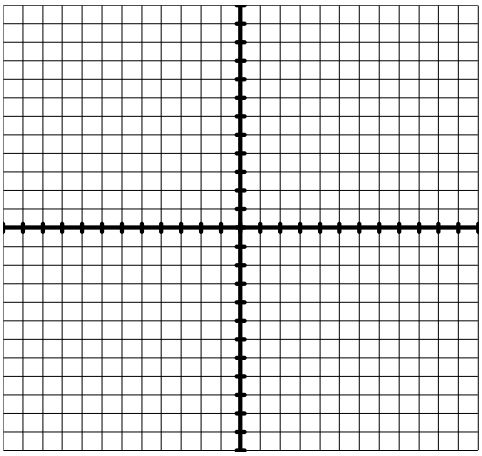
y-int.: _____

T.P.: _____

x –int._____



$P(x) = x^5 - 3x^4 - 5x^3 + 15x^2 + 4x - 12$



Degree: _____

Type: _____

L.C.: _____

y-int.: _____

T.P.: _____

x –int._____

How do the number of turning points and the degree relate?

What are some other names for x-intercepts?

How do the number of x-intercepts and degree relate?

How/where is the y-intercept shown in the function?

Hypothesize:

Come up with a statement that relates the degree, number of turning points, and the number of x-intercepts of a polynomial function.