

**POLYNOMIALS**

---

**EVALUATING  
POLY  
FUNCTIONS**

---

**ZEROS /  
ROOTS**

**ALL ABOUT**

---

**GRAPHING  
POLY  
FUNCTIONS**

---

**END  
BEHAVIOR**

Standard Form of a Polynomial:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Polynomials are classified by:

Number of Terms:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Degree:

\_\_\_\_\_  
 \_\_\_\_\_

Leading Coefficient:

\_\_\_\_\_

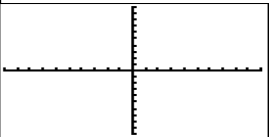
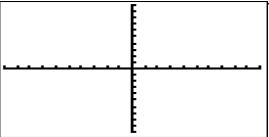
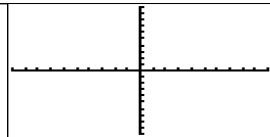
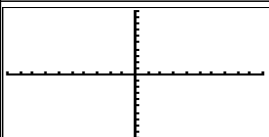
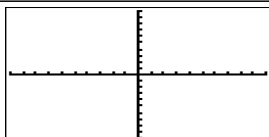
Example:

Find the sum and write in standard form:

$$(x^2 - 5x^3 + 7) + (6x + x^3 - 3x^2)$$

What is the degree? The leading coefficient?

Degree	Name of Polynomial	Example
<b>N=0</b>		
<b>N=1</b>		
<b>N=2</b>		
<b>N=3</b>		
<b>N=4</b>		
<b>N=5</b>		

Linear	Quadratic	Cubic
		
Quartic	Quintic	
		

Find  $f(-2)$  if  $f(x) = x^2 + 5x - 7$

Find  $f(2a)$  if  $f(x) = 2x^2 - 3x$

If  $p(x) = 4x^2 - 3$ , find  $p(a^2)$

If  $r(x) = 1 + 3x$ , find  $r(x + 2)$ .

End behavior: \_\_\_\_\_  
 \_\_\_\_\_

Even degree:

If "a" is positive:

If "a" is negative:

Odd degree:

If "a" is positive:

If "a" is negative:

Real zeros:

\_\_\_\_\_

\_\_\_\_\_

Even degree:

Odd degree: