**Polynomials - FAQ**

**Why do I get a "NullPointerException"?**

Null pointer exceptions (errors) occur when you attempt to call a method or access an instance variable of a reference type variable that hasn't been initialized. Example:

Monomial m;

m.coefficient = 5.67; //null pointer exception

The m variable is declared a Monomial type, but it hasn't been initialized to store a reference to a Monomial object. Initialize the variable as shown below, passing the desired instance variable values to the constructor method (in red), rather than setting it after:

Monomial m = new Monomial(5.67, 2);

System.out.println(m.coefficient); //works fine now!

Also, make sure you haven't RE-declared instance variables in the constructor. Example:

public class Polynomial {

Monomial one; //DECLARES instance variable *m* as Monomial type

public Polynomial() {

~~Monomial~~ one = new Monomial(5.67, 2); //don't RE-declare! Just initialize

**Why do I get an error saying "cannot make a static reference to the non-static method \_\_\_"?**

You are calling an *instance method* (a method that should called on a particular object) on the class name, rather than an object of that class. Example:

Polynomial p = new Polynomial();

//add some Monomial objects

Polynomial.evaluate(50); //should be *p.evaluate(50);*

//call on Polynomial object *p*, NOT on the Polynomial class

We will discuss the static keyword later this year. A TL;DR: if something is static, it belongs to the class, not a particular object of the class.