Sequencing Rationale

The first subunit that will be covered will be modeling polynomials. This section will have an overview of what a polynomial is and how to define different types. It will also review how to combine like terms and distribute to be able to add and subtract. Introducing algebra tiles at this point will not help them most likely, but it is essential that they understand how they are used for later use. Using examples that relate will be used at this point to help the understanding and connection of math to what they already know. The second subunit will deal with multiplying polynomials. The students will need to understand how the algebra tiles are used for multiplying and create is called the ‘box method’ from the tiles. This lesson is usually a student outcome of the problems that they work out. This unit will include special products of polynomials. It is most beneficial to start the unit with understanding what a polynomial is and then adding, subtracting and multiplying in that order because of difficulty.

The third subunit I will teach will be the first section on factoring with a leading coefficient that is equal to one. The students should be able to use what was learned from adding and subtracting unit, along with the multiplying unit to factor polynomials. This unit must come at a time when the first two units are close behind the first two units. Many problems in this unit are starting to relate to real-life problems and the graphing calculator is used in some ways. This subunit is one of the more difficult sections of the entire algebra 1 curriculum. The fourth subunit will cover more factoring, but will have a leading coefficient not equal to 1. The students will continue to use real-life problems including one on cliff diving. The students will continue to use factoring and factor special products including the difference of two squares and perfect square trinomials.

The last factoring subunit covered will be using the distributive property also called ‘factor by grouping.’ Students will need to use previously learned knowledge in other chapters to get the problem started and then use factoring information that was just previously learned in this unit to simplify the problems. The last subunit to be covered will be solving polynomial functions. This is typically placed before factoring but students have no idea why they are learning it until they learn how to factor. In this subunit the students will be able to get a problem, graph it and understand what they are solving and how it can be used. The students will be able to represent the growth of internet sites, finding archways, and other real-life examples. The main goal of the unit was for students to be able to factor and solve a polynomial and relate it to real-life problems. At this point, hopefully they will be able to do so.