

Upper Level Sequence

I have often been asked about the order in which Math-U-See presents *Algebra 1*, *Algebra 2*, and *Geometry*. There are three factors to consider when deciding in which order to take these upper level math courses.

The first is high school science. In order to perform well in chemistry, you need *Algebra 1*, and it is better to have *Algebra 2* as well. The more math students have studied before chemistry and physics, the easier it will be for them.

The second factor has to do with prerequisites. Exponents, roots, and radicals are presented in *Algebra 1*, and must be mastered before studying the Pythagorean theorem, which is a central topic in *Geometry*. In Math-U-See, exponents, roots, and radicals are covered in *Pre-Algebra* and *Geometry*, which allows for more flexibility in the upper level math sequence.

The third consideration is how a student learns and matures in his thinking ability. In our *Geometry* curriculum, we focus on measuring the earth (“geo” - earth, “metry” - measure) by learning lines, angles, planes, area, perimeter, volume, surface area, and the Pythagorean theorem first. In the last third of the book we study postulates, theorems, and proofs. This approach differs from many curricula, which devote most of their attention to abstract proofs instead of concrete formulas for measuring the earth. I believe simple maturation of a student helps them learn abstract concepts better. So, I put concrete subject matter in the beginning of the book, then proofs at the end, and we follow this pattern by studying *Algebra 2* after *Geometry*. *Algebra 2* is much more abstract than *Algebra 1*, particularly in Math-U-See where we still use manipulatives in *Algebra 1*.

I recommend the first sequence below, but recognize there may be exceptional circumstances which warrant an alternate approach. Or, a student may just want to accelerate his study of *Algebra 1* through *PreCalculus*. Three alternatives are described below.

Sequence 1

Algebra 1 – Geometry – Algebra 2 – PreCalculus with Trigonometry

If you are taking one course per year it would look like this:

Year 1 – *Algebra 1*

Year 2 – *Geometry*

Year 3 – *Algebra 2*

Year 4 – *PreCalculus with Trigonometry*

Sequence 2

Take *Algebra 1* and *Geometry* simultaneously. When you have completed these, take *Algebra 2*, followed by *PreCalculus with Trigonometry*. If you choose this option, you will notice that some algebra review problems are systematically sprinkled throughout the *Geometry Student Text*. Skip these problems or do them as your knowledge of algebra increases.

Year 1 – *Algebra 1* and *Geometry*

Year 2 – *Algebra 2*

Year 3 – *PreCalculus with Trigonometry*

Sequence 3

Take *Algebra 1*, then follow this by taking *Geometry* and *Algebra 2* at the same time. The following year, you will be prepared for *PreCalculus with Trigonometry*. If you decide on this course of action, finish *Geometry* Lesson 18 before beginning *Algebra 2* Lesson 22. Also, some of the test questions deal with geometry. Do them if you can, or skip them until your understanding of geometry increases.

Year 1 – *Algebra 1*

Year 2 – *Algebra 2 and Geometry*

Year 3 – *PreCalculus with Trigonometry*