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THE SEVENTH GRADE MATH Textbook and Curriculum Diana Tipton Grand

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Abstract

This essay examines a seventh grade book on math called Pre-Algebra and how it compares to the seventh grade math curriculum as enumerated in one website article. A brief discussion about the repetitious pattern of middle school math is also included.

The Seventh Grade Math: Textbook and Curriculum

Pre-algebra, as the name suggests, aims to equip students with the knowledge prerequisite to algebra. Similarly, algebra prepares students to the study of calculus. A good foundation in pre-algebra is therefore necessary for students to excel in higher math.

In my practicum observation, I had the chance to examine the seventh grader math book Pre-Algebra. On a superficial level, the book looks student-friendly with its simple and intuitive layout. Later on this essay, an in-depth examination will be given by comparing the book's contents with Deb Russell's list of basic math concepts that must be learned by students before proceeding to eighth grade.

Russell (2009), a Vice Principal of student achievement, lists in her online page the five core topics that must be taught in the seventh grade:

Number

This topic includes factors, multiples, integer amounts, square roots and the

four basic operations on fractions, decimals, percents and integers. Although these lessons can all be found in Pre-Algebra, the order in which they are presented does not conform to Russell's list. In my opinion, this difference may just be trivial as each chapter on the book begins with a " Before, Now and Why" section which summarizes the previous topic and explains how it is related to the present topic and its significance. The authors must have carefully arranged the chapters so that students can see how the topics are interrelated.

Measurement

As discussed in the class, this topic is all about finding the area of trapezoids, parallelograms, triangles, prisms circles and other basic shapes and calculating the volume of basic three dimensional figures. This too conforms to Russell's list, complete with well-drawn diagrams and carefully selected pictures as a visual aid.

Geometry

This topic was broken down into two separate chapters in the book: Geometric Shapes and Right Triangles, and Angle Relationships and Transformations. On this part, the book is even more advanced than what Russell recommends in that it includes basic trigonometry to better prepare students for higher math.

Algebra/Patterning

As algebra deals mostly with writing and solving equations, books should have a rich content on this topic. In fact, Russell listed only the basics in manipulating equations whereas Pre-Algebra authors are generous enough to include inequalities.

Probability

This topic is discussed in the chapter Ratio, Proportion and Probability, which suggests that the authors may have missed a huge portion of important concepts. In fact, the probability part took only one section of the chapter and did not even include the most basic ideas of mean, median and mode, as listed in Russell's page.

Conclusion

Russell also made the same list for the sixth and eighth grade on her website and surprisingly, the same core topics were listed except that the level of difficulty is directly proportional with the grade level. For example, the mean, median and mode were already listed as part of the basics in eighth grade probability. None of these curriculums seem repetitious with respect to its preceding grade level as we could clearly see that each core topic advances linearly in terms of the level of difficulty. This also encourages students to review the lessons in the previous year, especially on functions and integers.

References

Russell, D. (2009). 7th Grade Math Course of Study. Retrieved June 13, 2009, from http://math. about. com/od/reference/a/gr7. htm