

This text set is designed as a supplemental resource for a geometry course for secondary students. It contains a variety of texts related to geometry in some way, including applications of geometry and texts about geometers. It is designed to provide materials accessible to students at a wide range of reading levels.

Abbott, Edwin A. (1952). *Flatland: A romance of many dimensions* (6<sup>th</sup> ed.). New York : Dover Publications.

This is a piece of satirical fiction of about 100 pages written in 1884. It is a social satire as well as a mathematical story. It incorporates many ideas of geometry such as perspective, as well as dimensionality. This is a difficult but rewarding text I believe would greatly benefit secondary students who read it. The language of this book may cause readers more difficulty than the math. I chose this book because it alludes to sophisticated mathematical ideas in an understandable and alluring way, as well as because it is one of my favorites and is fun to read. Readers may need additional support for this text, especially for understanding the satire, but it is highly enjoyable.

SMOG: 14.62.

Banchoff, Thomas F. (1990). Slicing and Contours. In *Beyond the third dimension* (pp. 37-63). New York: Scientific American Library.

This book chapter references *Flatland* in its discussion of dimensionality, but takes a more serious and applied approach. This text discusses time as a fourth dimension, and slicing as a way of understanding higher dimensions, using CAT scan technology as well as other examples. I included this text because it is a more difficult text, it covers some of the same ideas of *Flatland*, but has a very different flavor. It contains only text, no formulas or equations, but does discuss many mathematical ideas in paragraph form.

SMOG: 10.75. References to conic sections may make this a bit more difficult.

Kane, Daniel B. (2006). We're hard-wired for geometry: Tests with Amazon villagers hint at innate geometrical sense. *American Association for the Advancement of Science. MSNBC*. Retrieved October 21, 2007, from <http://www.msnbc.msn.com/id/10925120/>

This online news article discusses the results of research conducted on whether geometric principles are intuitively known to everyone or learned. The article relates that the research supports the idea that geometric principles are intuitive. It provides examples of the geometric principles tested and the questions used to test them. I chose this text because it is conducive to debate, and brings up the importance of validity in research, and encourages students to bring critical thinking skills they have learned in other classes to math class, as well as highlighting the basic elements of geometric reasoning.

SMOG: 9.32

Lasky, Kathryn. (1994). *The librarian who measured the earth*. Boston: Little, Brown and Company.

This text is a children's book with full-page color illustrations. It is a biography of Eratosthenes, a Greek scholar who was the first person to accurately measure the circumference of the Earth. I included this text because of the clear, precise way Eratosthenes' method is described in simple language and because the easy vocabulary makes this text very accessible and comfortable to read.

SMOG: 8.48 The limited text and ample pictures make this text seem easier than the SMOG analysis.

Pappas, Theoni. (1991). Geometric Interpretation of prime numbers. In *More joy of mathematics: Exploring mathematics all around you* (p. 108). San Carlos: Wide World Publishing/Tetra.

This is a one page descriptive text with many diagrams. It describes how it may be determined geometrically whether or not a number is prime by rearranging squares. This is a highly visual text. I chose this text because the limited amount of words and its lack of difficult vocabulary make it quite accessible. I also chose this text as it connects prime numbers and geometry, it is related to methods used to factor algebraic expressions, and it will appeal to kinesthetic learners.

SMOG: 10.75 Note: I think this text is easier because there is little text and no hard vocabulary.

Reimer, Luetta & Reimer, Wilbert. (1990). The man who concentrated too hard. In *Mathematicians are people, too: Stories from the lives of great mathematicians* (pp.19-27). Parsippany: Dale Seymour Publications.

This is a short, somewhat fictional biography of Archimedes. It is a chapter from a young reader's book. It highlights the experiences, emotions, and beliefs of people living during this time, as well as Archimedes' mathematical achievements. I chose this text because of the way it portrays Archimedes as a living, feeling person, and for its excellent description of Archimedes' method of estimating pi. It also describes some of Archimedes' war machines, which may be quite interesting to some readers.

SMOG: 9.71 The easy style and language of this book make it easier reading.

Smith, Shelley J. (1995). Archeology. In Marla Parker (Ed.), *She does math: Real-life problems from women on the job* (pp. 7-13). The Mathematical Association of America.

This text is a selection from an anthology. It begins with a one-page autobiography of an archaeologist including how she came to like math and use it in her career. This is followed by specific examples of how the author uses math in her job. These examples include numbers and formulas, but the helpful text makes them reader-friendly. I included this text because it contains examples of Cartesian coordinates and formulas related to circles being used in a real job, as well as because of the personal, friendly account of the author's relationship with math. This is the most mathematical text in the set.

SMOG: 11.37

