

## 8.1-8.2

**Enlightening summary #1:** Chapter 8 recounts much of the modern mathematics that came about throughout the late fifteenth and sixteenth centuries. The chapter begins with the story of Galileo. Originally a medical student, Galileo would become an important martyr, spending most of his life disproving Aristotelian notions of astronomy, and enduring the many forms of punishment from dissenting establishments. Finally we begin to see bigger steps towards refining mathematical notation. Many people had a hand in developing the modern notation, Johann Widmann introduced the  $+$ , and  $-$  symbols. Robert Recode introduced the  $=$  symbol. Thomas Harriot introduced the  $<$ , and  $>$  symbols. We also saw the  $\div$  and  $\sqrt{\phantom{x}}$  symbols come about. Francois Vieta Introduced a symbolic notation for variables, allowing for a more general handling of equation. Finally Rene Descartes introduced the  $x^x$  power notation. We saw Simon Stevin popularize the use of decimal fractions with *The Tenth*. We also saw John Napier develop logarithms to aid in the computations in astronomy. Finally we saw Johannes Kepler and Tycho Brahe revolutionize astronomical mechanics.

**Enlightening summary #2:** The following section described the life of Rene Descartes. In *La Geometrie* Descartes laid the foundation for the beginnings of calculus and analytical geometry. Beyond that Descartes was a renowned philosopher, who strongly believed that the certainty of mathematics should serve as a model for other branches of study. The section ends with a piece on the discovery of Desargues theorem and the development of perspective geometry.

**Interesting:** I thought Kepler's quip about astrology was very funny.

*Mother Astronomy would certainly starve if the daughter Astrology did not earn their bread.* I thought it was clever that typesetters would rotate the radical symbol for less than and greater than.

**Confusing:** I am still a little confused as to how astronomers actually used Napier's book to calculate large products. Did they sum the logs together, and then reverse search the sum to find the product?