APPENDIX 3: Additional Resources

Chapter Resource

1. Leslie A. White, "The Locus of Mathematic Reality: An Anthropological Footnote", James Newman, editor. The World of Mathematics, Vol. 4 , pp. 2348 - 2364.
   A cultural anthropologist asks the question, "Do mathematical truths reside in the external world..., or are they man-made inventions?" An essay requiring thoughtful analysis.

1. Oswald Spengler "Meaning of Numbers", James Newman, editor, The World of Mathematics, Vol. 4, pp. 2315 - 2347.
   A challenging and somewhat obtuse essay on the cultural significance of mathematics.

1. Jerry P. King, The Art of Mathematics, pp. 1-34.
   The beginning of a book whose purpose is "partially to explain what it is the mathematicians see and why it has value." Written by one of my favorite profs and intramural basketball teammate.

1. Harold Heie, "Mathematics: Freedom within Bounds", Third Conference on Mathematics From a Christian Perspective, pp. 47-77. Also reprinted in The Reality of Christian Learning, edited by Heie and Wolfe, pp. 206-230.
   A Christian view of a philosophy of mathematics by a mathematician. Rather philosophical.

1. Paul Zwier, "Augustine's Mathematical Realism" A Seventh Conference on Mathematics From a Christian Perspective, pp. 38-56.
   A Christian mathematician analyzes Augustine's philosophy of knowing and applies it to the philosophic position of "Mathematical Realism." Some philosophical background useful.

2. www.cut_the_knot.com.pythagoras/index.html This site provides a variety of picture proofs of the Pythagorean theorem, related information and links.

2. John J. Davis, "Structure and Syntax of Biblical Numbers", Biblical Numerology, pp. 15 - 45.
   An introduction to the writing of numbers in the original languages of the Bible. Includes technical details.

2. John J. Davis, "Conventional Use of Numbers (in the Bible)", Biblical Numerology, pp. 49 - 91.
   The Biblical use of numbers for the affairs of daily life. Some consideration of textual "problems".

2. John J. Davis, "Rhetorical and Symbolic Use of Numbers (in the Bible)", Biblical Numerology, pp. 83 - 124.
   Literary uses of numbers in the Bible, including some exegesis. Some hermeneutics background helpful.

2. Lucas N.H.Bunt, Jones, and Bedient, "Egyptian Mathematics" , The Historical Roots of Elementary Mathematics, pp. 1 - 29.
   Includes lots of mathematical details and examples.

2. Richard J, Gilings, "Egyptian Mathematics", Mathematics in the Time of the Pharaohs, pp. 4 - 23, 232 - 241.

2. Gay Robins and Charles Shute, The Rhind Mathematical Papyrus, pp. 9-35.
The history, numerals, and basic arithmetic of this famous ancient Egyptian text (the book includes color pictures of the actual papyrus). A lot of mathematical detail about multiplication, division and fractions.

3. Dallas Willard, "Jesus the Logician", Christian Scholars Review 28:4 Summer, 1999, pp. 605-614

3. Philip J. Davis and Rube Hersch, "Loss of Meaning through Intellectual Processes: Mathematical", Descartes' Dream, pp. 278-300, A discussion of the negative aspects of the tendency toward abstraction in modern mathematics.

5. www.euler.ciens.ucv.ve/English/mathematics/pitagora.html Information about Pythagoras and his followers.

7. http://www.oup-usa.org/isbn/0195128427.html contains an excellent article on the Robert Kaplan boot The Nothing That Is, which talks about the history of zero and its development to being treted as an actual number instead of merely representing nothingness.

7. http://www,maa.org/reviews/zero2.html , An article on the book, Charles Seife's Zero: The Biography of a Dangerous Idea. There is just too many goodies to look up about the history of zero. A BUBBS post can only hold so much before it gets boring . But what I found on the

7. http://www.hedweb.com/zero.htm The Mathematics" section of this page addresses the mathematical side of answering the question "Why Does Anything Exist?"

7. www.crystalinks.com/indianamathematics.html A nice section on zero and how the Indians are given the credit for its development as a number

7. Karl Menninger, "The Westward Migration of the Indian Numerals", Number Words and Number Symbols, pp. 400 - 430.
A history of the Hindu-Arabic numerals.

9. Graham Flegg, "Aids to calculation", Numbers Through the Ages, pp. 176 - 206.
A history of the abacus from antiquity to modern times in various cultures, as well as some other early computing machines.

9. Karl Menninger, "Finger Counting", Number Words and Number Symbols, pp. 199 - 220.
A historical and cultural survey of various techniques of counting on your fingers.

9. Karl Menninger, "Alphabetical Numerals", Number Words and Number Symbols, pp. 257 - 278.
The use of letters as numbers in several languages and cultures.

9. Karl Menninger, "Ancient Abacus", Number Words and Number Symbols, pp. 295 - 331.
A survey of the use of the counting board across the ancient world.

10. Graham Flegg, "Counting Systems", Numbers Through the Ages, pp. 5 - 37.
An extensive survey of counting systems used throughout the world, with many interesting examples.

11. Lucas N.H.Bunt, Jones, and Bedient, "Numeration and Arithmetic After the Greeks", The Historical Roots of Elementary Mathematics, pp. 221 - 252.
A survey including Roman, Hindu, Arabic and Mayan numerals. Calculations with fractions. Lots of mathematical details and examples.

12. Yoshio Mikami, The Development of Mathematics in China and Japan, Chapters 1-3 on early Chinese mathematics, pp. 1-25.
Assumes some familiarity with Chinese history, and does mention some geometric and algebraic details.

12. Karl Menninger, "Numbers in China and Japan", Number Words and Number Symbols, pp. 447 - 467.

12. www.coco.ihi.ku.dk/~dbwagner/Pythagoras/Pythagorean.html The "Pythagorem theorem" as discussed in early Chinese math.

15. B.A. Rosenfeld, "Philosophy of Space", A History of Non-Euclidean Geometry, pp. 181 - 205.
A historical survey of the philosophical approaches to understanding "space". Very detailed, quoting lots of philosophers.

16. Thomas Banchoff, Beyond the Third Dimension, pp.1-35.
A discussion of "dimension" by a fan of Flatland. Nicely illustrated, with some mathematical details that can be ignored if you look carefully at the pictures.

16. Marcia Ascher, "Numbers: Words and Symbols", Ethnomathematics , pp.1-26.
An introduction to the numerical ideas of "traditional" peoples. (Some later chapters of this book include more advanced mathematics.) Written by one of the leaders of the study of mathematics from an anthropological point of view.

18. Carl Boyer, "The Arabic Hegemony", A History of Mathematics, pp. 253-274.
An historical overview of the Arabic contributions to mathematics.

18. Morris Kline, "The Newtonian Influence: Religion" and "The Newtonian Influence: Literature and Aesthetics", Mathematics in Western Culture, pp. 257-286.
A brief account of how the science of Isaac Newton impacted culture beyond science by the author of our text. No background necessary.

18. Philip J. Davis and Rube Hersch, "Loss of Meaning through Intellectual Processes: Mathematical", Descartes' Dream, pp. 3-14, The vision of Descartes for the impact of mathematics on civilization.

19. Erwin Panofsky, "Dürer as a Mathematician" and the surrounding discussion, James Newman, editor. The World of Math, Vol. 1, pp 600 - 626.
A rather technical discussion of the details of Dürer's painting by an art historian.

21. Philip J. Davis and Ruben Hersch, "Non-Euclidean Geometry and Ethical Relativism", Descartes' Dream, pp. 203-217,

21. Stephan Körner. "Some Older Views." The Philosophy of Mathematics, pp. 9 -31.
A brief treatment of the views of Plato, Aristotle, Leibnitz and Kant on the philosophy of mathematics. Some philosophy background helpful

21. Raymond Wilder, "Evolution of Geometry", Evolution of Mathematical Concepts, pp.77-107.
An historical overview of the development of the "geometric" part of mathematics. No background necessary.

22. A. K. Dewdney, 200% of Nothing, pp. 3-42.
An entertaining (?) look at "the major forms of math abuse in today's world." The beginning chapters of a book encouraging people to become more knowledgeable about how math, especially statistics, is being used (or misused) all around them.

22. Darrell Huff, How to Lie With Statistics, pp. 7 - 59.
A very readable (pictures and big print) introduction to the potential for misuse of statistics.

22. Horace Levinson, Chance, Luck and Statistics, pp. 39-84.
An introduction to theory of probability, with a discussion of betting and buying life insurance. Some mathematical details.

22. Rich Kennedy, "The Application of Mathematics to Christian Apologetics in Pascal's *Pensees* and Arnauld's *The Port-Royal Logic*", Fides et Historia, Winter/Spring, 1991, pp. 37-52.
A paper putting Pascal's use of mathematical ideas in apologetics into its historical context.

24. A.W. Moore, The Infinite, pp. 17-49.
A philosopher looks at various Greek views concerning infinity.

25. Joseph Dauben, "Cantor's Philosophy of the Infinite", Georg Cantor: His Mathematics and Philosophy of the Infinite, pp. 120-148.
Some philosophy background helpful.

25. Raymond Wilder, "The Real Numbers. Conquest of the Infinite", Evolution of Mathematical Concepts, pp. 108-143.
An historical and mathematical sketch of the development of the real number systems and the "transfinite" numbers. Some mathematical details are included.

www.c3lanl.gov/mega-math/work/ok/infinity/inhotel.html An interesting fantasy about running an "infinite hotel"