

A Correlation of

Math for Your World
Blitzer, © 2012



to the

Alabama Course of Study: Mathematics
Algebraic Connections

Introduction

The following correlation demonstrates the alignment of content between *Math for Your World (Blitzer)* ©2012 and the Alabama Course of Study Mathematics, Algebraic Connections. This document contains references to the page numbers from the Student and Teacher's Editions.

Math for Your World provides a general survey of mathematical topics that are useful in our contemporary world. The general purpose for writing the book is to help high school students gain mathematical literacy by showing them how mathematics can be applied to their lives in interesting, enjoyable, and meaningful ways. The book has four major goals:

1. To help students acquire knowledge of fundamental mathematics that can be applied in future coursework and training programs.
2. To show students how mathematics can solve authentic problems that apply to their lives.
3. To develop mathematically proficient students who reason with quantitative issues and mathematical ideas they are likely to encounter in postsecondary education, career, and life.
4. To enable students to develop problem-solving skills, while fostering critical thinking, within an interesting setting.

The book's variety of topics and flexibility of sequence make it appropriate for a one-semester or one-year course for high school juniors and seniors that integrates topics from previous math courses and looks ahead to topics in future higher-education coursework. The text addresses the gamut of core content skills and Mathematical Practices covered in the Common Core State Standards for Mathematics. Students completing a course based on the topics in *Math for Your World* should be prepared for nonremedial or credit-bearing college mathematics courses as well as for training programs for career-level jobs.

Features

- Detailed development of Algebra topics early in the textbook enhances students' skills before moving on.
- Voice balloons and step-by-step solutions walk students through examples.
- Extensive chapter review materials, such as visuals and additional examples, help students prepare for the test.
- The Brief Review feature covers topics students already know, freeing up classroom time for new topics.
- Two chapters dedicated to financial mathematics prepare students for using math in the real world.
- Blitzer provides the applications and technology students need to gain an appreciation for mathematics.
- MathXL for School, an online homework, practice, review, and assessment program that provides personalized study plans and auto-graded assignments is available for purchase.

This document demonstrates the high degree of success students will achieve by using *Math for Your World*.

ALGEBRAIC CONNECTIONS	
<p>Algebraic Connections is a course designed for students who wish to increase their mathematical knowledge and skills prior to enrollment in the Algebra II course or the Algebra II With Trigonometry course. Algebraic Connections expands upon the concepts of Algebra I and Geometry, with an emphasis on application-based problems. This course provides opportunities to incorporate the use of technology through its emphasis on applying functions to make predictions and to calculate outcomes. The prerequisites for Algebraic Connections are Algebra I and Geometry.</p>	
ALGEBRA	
Modeling	
Alabama Course of Study: Mathematics Algebraic Connections	Math for Your World (Blitzer) © 2012
1. Create algebraic models for application-based problems by developing and solving equations and inequalities, including those involving direct, inverse, and joint variation.	SE/TE: 223, 243—249, 252—254, 257—258, 262—266, 267—269, 276—277, 279—280, 289—292, 382—383, 401, 407—410, 411—413
2. Solve application-based problems by developing and solving systems of linear equations and inequalities.	SE/TE: 343—344, 346,—348, 352—353, 356—357, 369
3. Use formulas or equations of functions to calculate outcomes of exponential growth or decay.	The opportunity to introduce this objective is available. See the following: SE/TE: 424-432
Graphing	
4. Determine maximum and minimum values of a function using linear programming procedures.	The opportunity to introduce this objective is available. See the following: SE/TE: 348-355
5. Determine approximate rates of change of nonlinear relationships from graphical and numerical data.	SE/TE: 23—24, 27—28, 44, 47, 49—50, 316, 320
a. Create graphical representations from tables, equations, or classroom-generated data to model consumer costs and to predict future outcomes.	SE/TE: 49, 50, 291, 325, 332, 342
6. Use the extreme value of a given quadratic function to solve applied problems.	SE/TE: 430, 432—434, 444, 446
Finance	
7. Use analytical, numerical, and graphical methods to make financial and economic decisions, including those involving banking and investments, insurance, personal budgets, credit purchases, recreation, and deceptive and fraudulent pricing and advertising.	SE/TE: 343—345, 346—348, 482—486, 498—503, 505—514, 515—524, 525—533, 534—542
a. Create, manually or with technological tools, graphs and tables related to personal finance and economics.	SE/TE: 529, 533—534, 536

GEOMETRY	
Modeling	
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8. Determine missing information in an application-based situation using properties of right triangles, including trigonometric ratios and the Pythagorean Theorem.	SE/TE: 603, 607—612, 643—650, 651—652, 664
Symmetry	
9. Analyze aesthetics of physical models for line symmetry, rotational symmetry, or the golden ratio.	SE/TE: 165, 421, 423, 425, 433
Measurement	
10. Critique measurements in terms of precision, accuracy, and approximate error.	The opportunity to address this standard is available. Please see: SE/TE: 556, 566, 575
11. Use ratios of perimeters, areas, and volumes of similar figures to solve applied problems.	The opportunity to address this standard is available. Please see: SE/TE: 255, 641
STATISTICS AND PROBABILITY	
Graphing	
12. Create a model of a set of data by estimating the equation of a curve of best fit from tables of values or scatter plots.	SE/TE: 325, 332—333, 367—368, 372
a. Predict probabilities given a frequency distribution.	SE/TE: 699—700, 703, 716, 721—722, 742—744, 745—746