

**ATLANTIC CHRISTIAN ACADEMY**

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| **A.C.A. Course Outline/Syllabus** |
| **Grade/Course: ALGEBRA I** [**1200310**](https://sitebuilder.homestead.com/~site/builder/stage.jsp?pageId=x437572726963756c756d2e787066) |
| **Grade Level:** 9thHigh School |
| **A)TEXT BOOK: Glencoe McGraw Hill Algebra Concepts and Applications** |
| **Glencoe Algebra: Concepts and Applications, Volume 2, Student Edition [Hardcover]** [**McGraw-Hill**](http://www.amazon.com/s/ref%3Dntt_athr_dp_sr_1?_encoding=UTF8&field-author=McGraw-Hill&search-alias=books&sort=relevancerank)**(Author)** |
| **ISBN-10: 0078607752 | ISBN-13: 978-0078607752** |
| **Order No.:** 1 |  | **Code:**ALG1000 | **Class Type:**Online |
| **Resources:**Text bookTeacher works CD Teacher interactive onlineLinks |  |  | **Instructional Supports:**Textbook, Magazines, Journals, Websites Links, Blackboard, Conference, Comprehensive Reading Plan |
| Sky Conference |  | **Length:**1 year |  |
| **Area:**Mathematics |  | **Credits:** 1 | **Total Numbers of class hours**:300 hrs |
| **Type:** Mandatory |  | **Standards:**Florida Sunshine State Standards | **Prerequisite:**Students must have successfully passed a pre-algebra or a general math class in middle/high school. |
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| **B) Description:**  |

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| This course is a full year, high school credit course that is intended for the student who has successfully mastered the core algebraic concepts covered in the prerequisite course, Pre-Algebra. Within the Algebra I course, the student will explore basic algebraic fundamentals such as evaluating, creating, solving and graphing linear, quadratic, and polynomial functions. Upon successfully completing the course, the student should have mastered the following concepts: • Solve single variable, absolute value, and linear systems of equations. • Solve and graph single variable, absolute value, and linear inequalities. • Evaluate, solve, and graph linear and quadratic functions as well as conceptualize the relationship between the independent and dependent variable of a function. • Understand and know how to apply the distance, midpoint, and slope formulas as well as the Pythagorean theorem. • Form an equation of a line using the slope-intercept, point-slope and standard forms of a line.• Organize data in the form of a table or matrix; perform complex matrix operations such as multiplication, evaluating the determinant, and solving a system of linear equations using Cramer's Rule. • Apply basic fundamental rules of exponents. • Be able to construct a formula or equation necessary to solve algebraic word problems involving area, perimeter, and linear systems of equations, basic probability and statistical reasoning, distance, and compounding interest. • Evaluate rational |

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| **C) Objectives:**  |

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| 1. To develop in all students an appreciation, curiosity and understanding for mathematics
2. to develop in all students analytical, reasoning, and critical thinking skills
3. to promote an awareness of mathematics
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| **D) Contents** |  |

 **Chapters**

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|  | **Chapter 3**Addition and Subtraction/Equations**Chapter 4:** Multiplication & division of Equations Chapter 5 Proportional Reasoning and Probability  | Number, Number Sense and Operations Data Analysis and Probability  |
|  | Chapter 6 Functions and Graphs Chapter 7 Linear Equations Chapter 8 Powers and Roots  | Number, Number Sense and Operations Patterns, Functions and Algebra  |
|  | Chapter 9 Polynomials Chapter 10 Factoring Chapter 11 Quadratic and Exponential functions  | Patterns, Functions and Algebra Mathematical Process Standard  |
|  | Chapter 12 Inequalities Chapter 13 Systems of Equations and Inequalities Chapter 14 Radical Expressions Chapter 15 Rational Expressions | Number, Number Sense and OperationsPatterns, Functions and Algebra Mathematical Process Standard

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| Mathematical Process Standard  |

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**E. Methodology**

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| **E)Academic Methodology:** |
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|  Tests | 30% |
| Writing Reports | 20% |
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| Homework |

 | 5% |
|  Class Work |  20% |
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| Reading Assignment |

 |  25% |

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| **F) Book Reference:** |
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# 1.McDougalLittell Algebra 1: Applications, Equations, & Graphs [Hardcover] (Author)

# 2. Algebra Survival Guide Workbook: Thousands of Problems To Sharpen Skills and Enhance Understanding [Paperback] by [Josh Rappaport](http://www.amazon.com/Josh-Rappaport/e/B001KC9LYI/ref%3Dntt_athr_dp_pel_1)(Author)

# 3 High School Algebra Tutor (High School Tutors Study Guides) [Paperback]

[The Editors of REA](http://www.amazon.com/s/ref%3Dntt_athr_dp_sr_1?_encoding=UTF8&field-author=The%20Editors%20of%20REA&search-alias=books&sort=relevancerank) (Author), [Algebra Study Guides](http://www.amazon.com/s/ref%3Dntt_athr_dp_sr_2?_encoding=UTF8&field-author=Algebra%20Study%20Guides&search-alias=books&sort=relevancerank) (Author), [Staff of Research & Education Association](http://www.amazon.com/s/ref%3Dntt_athr_dp_sr_3?_encoding=UTF8&field-author=Staff%20of%20Research%20%26%20Education%20Association&search-alias=books&sort=relevancerank) (Author)

**H) Web Reference:**

[**http://www.calculatorsoup.com/**](http://www.calculatorsoup.com/)

[**www.mathlinks.us**](http://www.mathlinks.us)

[**www.coolmath.com**](http://www.coolmath.com)

[**www.mathpower.com/linkstu.htm**](http://www.mathpower.com/linkstu.htm)

**www.algebra.com**

[**www.math.com**](http://www.math.com)

[**www.purplemath.com/modules/index.htm**](http://www.purplemath.com/modules/index.htm)

[**www.softmath.com/links-to-algebra.html**](http://www.softmath.com/links-to-algebra.html)

[**www.emtech.net/math2.htm**](http://www.emtech.net/math2.htm)

[**www.homeschoolmath.net/online/algebra.php**](http://www.homeschoolmath.net/online/algebra.php)

[**www.webmath.com**](http://www.webmath.com)

[**http://www.homeworksimplified.com**](http://www.homeworksimplified.com)

[**www.homeschoolmath.net**](http://www.homeschoolmath.net)

[**http://school.discoveryeducation.com/homeworkhelp/webmath/**](http://school.discoveryeducation.com/homeworkhelp/webmath/)

[**http://www.cut-the-knot.org/content.shtml**](http://www.cut-the-knot.org/content.shtml)

[**http://tutorial.math.lamar.edu/Extras/AlgebraTrigReview/AlgebraTrigIntro.aspx**](http://tutorial.math.lamar.edu/Extras/AlgebraTrigReview/AlgebraTrigIntro.aspx)

[**http://www.sosmath.com/**](http://www.sosmath.com/)

[**http://www.ams.org/mathscinet/**](http://www.ams.org/mathscinet/)

[**http://www.aaamath.com/**](http://www.aaamath.com/)

[**http://www.algebrahelp.com**](http://www.algebrahelp.com)

**I. Journals:**

Advances in Applied Mathematics

Advances in Difference Equations

Advances in Differential Equations

Advances in Geometry

Advances in Mathematics

Advances in Theoretical and Mathematical Physics

Algebra & Number Theory

Algebra Colloquium

Algebra Universalis

Algebraic & Geometric Topology

American Journal of Mathematics

American Mathematical Monthly

Analysis and Applications

The Analyst

**J.Magazines:**

Math Horizons

Millennium Mathematics

**K. Organizations:**

National Council of Teachers of Mathematics (N.C.T.M.)

**M. Comprehensive Reading Plan**

Students are required to read at least 1 book or their equivalent during each class

as independent reading at-home. Students must also read for 30 minutes at home as part of their daily homework assignment in all subjects. Check your Class Reading.

**Text Book Description:**

Publication Date: July 5, 2003 | ISBN-10: 0078607752 | ISBN-13: 978-0078607752 | Edition: 1

An ideal program for struggling students.

Glencoe Algebra: Concepts and Applications, Volume 1 and Volume 2 cover all Algebra 1 concepts in a two-volume format.



**ACADEMIC MISCONDUCT:**

Academic misconduct includes cheating (using unauthorized materials, information, or study aids in any academic exercise), plagiarism, falsification of records, unauthorized possession of examinations, intimidation, and any and all other actions that may improperly affect the evaluation of a student’s academic performance or achievement, or assisting others in any such act or attempts to engage in such acts. Academic misconduct in any form is inimical to the purposes and functions of the school and therefore is unacceptable and prohibited.

Any faculty member, administrator or staff member may identify an act of academic misconduct and should report that act to the department head or administrative supervisor.

Students violating the standards of academic honesty are subject to disciplinary action including reduction of a grade(s) in a specific course, assignment, paper, or project; a formal or informal reprimand at the professorial, dean, or academic vice president level; expulsion from the class in which the violation occurred; expulsion from a program; or expulsion from the school.

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