

August 2011 – May 2012  
9:30-10:30am

Kingdom Builders Homeschool Cooperative  
www.kingdombuilderscoop.com

# Algebra I

## Course Description

The purpose of this course is to provide instruction on Algebra I material and help students remain consistent in covering material over the year.

An average of 5 lessons will be covered every week (as few as 3, as many as 9). The student will be assigned weekly homework, an average of 5-7 hours per week, from the recommended text. Extra practice sheets will be available upon request.

## Course Expectations

- Homework: usually Set I & Set II of each lesson
- Set III is optional, as needed for extra practice
- Chapter Tests (taken at home, graded in class)
- Test corrections (completed at home, graded in class)
- Class notes
- Class participation

The key to succeeding in this course is paying attention to instruction in class, taking thorough class notes, completing all assignments, and correcting missed problems on homework and tests. If a student is having difficulty succeeding, extra practice or additional one-on-one instruction may be the solution. *If a student makes less than 80 on a test, the student will be required to correct the test and gain half-credit for each one corrected (work must be shown).*

## Grading Scale

Tests	75%
Homework	20%
Participation	5%

## Required Materials

- Elementary Algebra*, by Harold Jacobs, ISBN 978-0-7167-1047-9
- Solutions Manual for Elementary Algebra*, by Harold Jacobs ISBN 978-0-615-31501-0
- Spiral notebook w/ perforated pages or 3-ring binder w/ paper
- Lots of pencils (no pens)
- Big eraser
- Scientific calculator, preferably TI-30 or better
- Pastel colored index cards, w/ or w/out lines

**BRING ALL OF THE ABOVE TO CLASS EACH FRIDAY**

## Main Course Objectives

- To perform the four operations with algebraic terms
- To simplify algebraic terms
- To solve equations and inequalities with algebraic terms
- To perform the four operations with polynomials
- To simplify polynomials
- To solve equations with polynomials

## Course Prerequisites

- 8<sup>th</sup> grade math or PreAlgebra

Please note that we are meeting on Fridays. The expectation is that the student will have read and completed assignments prior to coming to class. **This includes the first week of class.**

**These first assignments are due August 26, first wk of class. It looks like a lot, but it should be all review from last year. This is 2 weeks worth of assignments. Students can look at the summary and review at the end of the chapter, and skip some lessons if they feel it's too easy.**

Chapter 1: Fundamental Operations

<b>Mon</b>	L1	Addition	Set II
<b>Tue</b>	L 2	Subtraction	Set II
<b>Wed</b>	L 3	Multiplication	Set II
<b>Thu</b>	L 4	Division	Sets I & II
<b>Fri</b>	L 5	Raising to a Power	Set II
<b>Mon</b>	L 6	Zero & One	Sets I & II
<b>Tue</b>	L 7	Several Operations	Set II
<b>Wed</b>	L 8	Parentheses	Sets I & II
<b>Thu</b>	L 9	The Distributive Rule	Set II
<b>Fri</b>		Summary & Review	Set I , Set II if needed

\*\*Students will only be graded for Summary & Review, Set I, for this chapter. Complete chapter one lessons only as needed for review. Skip lessons too easy.

**Week 1 (August 26, 2011) Review of ch 1, Instruction on ch 2 Functions & Graphs**

<b>Mon</b>	L 1	An Intro to Functions	Set II & <b>take Ch 1 Test</b>
<b>Tue</b>	L 2 & 3	The Coordinate Graph & More on Functions	Set II
<b>Wed</b>	L 4	Direct Variation	Sets I & II
<b>Thu</b>	L 5 & 6	Linear Functions & Inverse Variation	Set II
<b>Fri</b>		Summary & Review	Set I

**Week 2 (September 2, 2011) Review of Ch 2, Instruction on ch 3 The Integers**

<b>Mon</b>	L 1 & 2	The Integers & More on Coordinate Graph	Set II & <b>take Ch 2 test</b>
<b>Tue</b>	L 3 & 4	Addition & Subtraction	Set II
<b>Wed</b>	L 5 & 6	Multiplication & Division	Set II
<b>Thu</b>	L 7	Several Operations	Set II
<b>Fri</b>		Summary & Review	Set I

**Week 3 (September 9, 2011) Ch 4 The Rational Numbers**

<b>Mon</b>	L 1	The Rational Numbers	Set II & <b>take Ch 3 test</b>
<b>Tue</b>	L 2	Absolute Value & Addition	Set II
<b>Wed</b>	L 3	More on Operations w/ Rational Nos.	Sets I & II
<b>Thu</b>	L 4 & 5	Approximations & More on Graphing Functions	Set II
<b>Fri</b>		Summary & Review	Set I

**Week 4 (September 16, 2011) Ch 5 Equations in One Variable**

<b>Mon</b>		<b>Take Ch 4 test</b>	
<b>Tue</b>	L 1	Equations	Set II
<b>Wed</b>	L 2	Inverse Operations	Set II
<b>Thu</b>	L 3	Equivalent Equations	Sets I & II
<b>Fri</b>	L 4	Equivalent Expressions	Set II

September 23rd Fall Break

**Week 5 (September 30, 2011) Ch 5 Equations in One Variable**

<b>Mon</b>	L 5	More on Solving Equations	Sets I & II
<b>Tue</b>	L 6	Length & Area	Set II
<b>Wed</b>	L 7	Distance, Rate & Time	Set II
<b>Thu</b>	L 8	Rate Problems	Sets I & II
<b>Fri</b>		Summary & Review	Set I, Set II if needed

**Week 6 (October 7, 2011) Ch 6 Equations in Two Variables**

<b>Mon</b>	<b>Take Ch 5 Test</b>		
<b>Tue</b>	L 1	Equations in Two Variables	Set II
<b>Wed</b>	L 2	Formulas	Sets I & II
<b>Thu</b>	L 3	Graphing Linear Equations	Set II
<b>Fri</b>	L 4	Intercepts	Sets I & II

**Week 7 (October 14, 2011) Ch 6 Equations in Two Variables**

<b>Mon</b>	L 5	Slope	Set II
<b>Tue</b>	L 6	The Slope Intercept Form	Set II
<b>Wed</b>		Summary & Review	Set I
<b>Thu</b>		Summary & Review	Set II
<b>Fri</b>		None	

**Week 8 (October 21, 2011) Ch 7 Simultaneous Equations**

<b>Mon</b>	<b>Take Ch 6 Test</b>		
<b>Tue</b>	L 1	Simultaneous Equations	Set II
<b>Wed</b>	L 2	Solving by Subtractions	Set II
<b>Thu</b>	L 3	More on Solving by Addition/Subtraction	Sets I & II
<b>Fri</b>	L 4	Graphing Simultaneous Equations	Set II

**Week 9 (October 28, 2011) Ch 7 Simultaneous Equations**

<b>Mon</b>	L 5	Inconsistent & Equivalent Equations	Set II
<b>Tue</b>	L 6	Solving by Substitution	Sets I & II
<b>Wed</b>	L 7	Mixture Problems	Set II
<b>Thu</b>		Summary & Review	Set I
<b>Fri</b>		Summary & Review	Set II, if needed

**Week 10 (November 4, 2011) Ch 8 Exponents**

<b>Mon</b>	<b>Take Ch 7 Test</b>		
<b>Tue</b>	L 1	Large Numbers	Set II
<b>Wed</b>	L 2 & 3	A Fundamental Property of Exponents & Two More Properties of Exponents	Set II
<b>Thu</b>	L 4	Zero & Negative Exponents	Sets I & II
<b>Fri</b>	L 5	Small Numbers	Sets I & II

**Week 11 (November 11, 2011) Ch 8 & review for Midterm**

<b>Mon</b>	L 6 & 7 Powers of Products and Quotients & Exponential Functions	Set II
<b>Tue</b>	<b>Take Ch 8 Test</b>	
<b>Wed</b>	<b>Midterm Review</b>	<b>Set I</b>
<b>Thu</b>	<b>Midterm Review</b>	<b>Set II</b>
<b>Fri</b>	<b>Midterm Review</b>	<b>Set III</b>

**Week 12 (November 18, 2011) Midterm Exam (Chapters 1-8)**

<b>Mon</b>	<b>No homework during Thanksgiving break</b>
<b>Tue</b>	
<b>Wed</b>	
<b>Thu</b>	
<b>Fri</b>	

**November 25<sup>th</sup> Thanksgiving Break**

**Week 13 (December 2, 2011) Ch 9 Polynomials**

<b>Mon</b>	L 1 Monomials	Set II
<b>Tue</b>	L 2 Polynomials	Set II
<b>Wed</b>	L 3 Adding & Subtracting Polynomials	Sets I & II
<b>Thu</b>	L 4 Multiplying Polynomials	Set II
<b>Fri</b>	L 5 More on Multiplying Polynomials	Sets I & II

**Week 14 (December 9, 2011) Ch 9 Polynomials**

<b>Mon</b>	L 6 Squaring Binomials	Set II
<b>Tue</b>	L 7 Dividing Polynomials	Set II
<b>Wed</b>	Summary & Review	Set I
<b>Thu</b>	<b>Take Ch 9 test</b>	
<b>Fri</b>		

**Week 15 (January 13, 2012) To Be Announced Fall Semester**

<b>Mon</b>
<b>Tue</b>
<b>Wed</b>
<b>Thu</b>
<b>Fri</b>

**Week 16 (January 20, 2012)**

<b>Mon</b>
<b>Tue</b>
<b>Wed</b>
<b>Thu</b>
<b>Fri</b>

**Week 17 (January 27, 2012)**

**Mon  
Tue  
Wed  
Thu  
Fri**

**Week 18 (February 3, 2012)**

**Mon  
Tue  
Wed  
Thu  
Fri**

**Week 19 February 10, 2012)**

**Mon  
Tue  
Wed  
Thu  
Fri**

**February 17<sup>th</sup> Teen Pact Break**

**Week 20 (February 24, 2012)**

**Mon  
Tue  
Wed  
Thu  
Fri**

**Week 21 (March 2, 2012)**

**Mon  
Tue  
Wed  
Thu  
Fri**

**Week 22 (March 9, 2012)**

**Mon  
Tue  
Wed  
Thu  
Fri**

**Week 23 (March 16, 2012)**

**Mon  
Tue  
Wed  
Thu  
Fri**

**Week 24 (March 23, 2012)**

**Mon  
Tue  
Wed  
Thu  
Fri**

**Week 25 (March 30, 2012)**

**Mon  
Tue  
Wed  
Thu  
Fri**

**April 6<sup>th</sup> Easter Break**

**Week 26 (April 13, 2012)**

**Mon  
Tue  
Wed  
Thu  
Fri**

**Week 27 (April 20, 2012)**

**Mon  
Tue  
Wed  
Thu  
Fri**

**Week 28 (April 27, 2012)**

**Mon  
Tue  
Wed  
Thu  
Fri**

**May 4<sup>th</sup> GHEA Break**

**Week 29 (May 11, 2012)**

**Mon  
Tue  
Wed  
Thu  
Fri**

**Week 30 (May 18, 2012)**

**Friday May 18, 2012 Last Day of Class, End of Session**