



Division: Mathematics

Course name: Math 123B: Beginning-and Intermediate Algebra

Sections: 1476 / **Semester:** Fall 2015

Instructor Name: H. Feiner

School Website: www.wlac.edu

Class Hours: (M)TWTh
1:00-2:15 P.M.

Address: 9000 Overland Ave., Culver City, CA 90230
Location: SC 106 (may change)

Office Hours: MW
2:15-5:15 P.M.

Instructor E-mail: FeinerH@wlac.edu
Office Location: MSB 219

Welcome

This semester, you will work to develop your algebraic thinking skills. The goal is for you re-acquire the basic skills needed to succeed in this and subsequent technical classes and become more confident. The skills you learn here will help you succeed both in and out of class. However, your education is ultimately YOUR responsibility. YOU determine your level of success. Successful college students are self-motivated. Successful college students understand the importance of studying the material, coming to class prepared and practicing skills learned. YOU CAN DO IT and I'm here to help. Work with me, even when my method is different from what you learned before. Reconcile my presentation with what you think you remember. I try to teach you understanding, not just blind memorization of rules. 😊

Course Description:

Second of three modules for Math 123 elementary algebra topics such as addition, subtraction, multiplication of polynomials, solution of second degree equations and radical expressions. Solution of word problems involving second degree equations and radical expressions.

This second course in algebra is designed to give students *more understanding of and solidification of the basics of algebra*. To attain this mastery, students must have a genuine desire to combat arithmetic deficiencies. Students are on the second floor of their technical endeavor. If students think that algebra is irrelevant to their course of study, remember that half the jobs in the future have not yet materialized. We live in a technical society. If you are just out of high school, twenty years from now, when you have more responsibilities and less time, you may regret that you were not serious in mastering algebra basics. This course is not UC/CSU transferable.

Required Texts

The textbook. Is "Beginning and Intermediate Algebra" 5/e by Margaret Lial, John Hornsby and Terry McGinnis,

Textbook ISBN-: 9780321715425

You should already have this book. (If you use MyMathLab, your registration should still be valid.)

You are expected to do homework from the first day on. Lacking Internet access is no excuse. Computers are available in the HLCR (library, first floor).

Having no book yet is no excuse either. You can do substitute homework online as follows:

Log into <http://www.interactmath.com/>

Enter

Choose a book > (scroll down) **Lial: Beginning & Intermediate Algebra, 5e**

Submit

Chapter Contents opens. Click on chapter 1 and expand (click on the plus sign).

Click on section 1 “[The](#) Real Number System” Select question 1. Choose the proper answer and check it.

Then click on circle 2, etc. Exercise all the questions,

When finished, click on Close.

A summary is shown with green checkmarks and/or red Xs. Print this page so that you have proof of having done homework. Put the summary in your homework notebook.

Recommended Materials

A scientific calculator, to be used sparingly. This is no substitute for having memorized the addition and multiplication of simple integers.

My book at http://resources.wlac.edu/userfiles/feinerh/Book_1_2015.pdf

Required Materials

- One notebook for class notes
- #2 pencils or pens, and an eraser
- and one for homework.

Course Objectives:

General Institutional SLO—Student Learning Objectives

Critical Thinking: Analyze problems by differentiating fact from opinions, using evidence, and using sound reasoning to specify multiple solutions and their consequences.

Quantitative Reasoning: Identify, analyze, and solve problems that are quantitative in nature

Technical Competence: Utilize the appropriate technology effectively for informational, academic, personal, and professional needs.

Student Learning Outcomes (SLO)

- Apply quantitative thinking processes using basic mathematical operations (addition, subtraction, and multiplication, division) to solve common academic, workplace and family problems
- Use mathematical tools essential for analyzing quantitative problems and for producing solutions.
- Select appropriate math strategies for solving and handling real life problems involving finance, economics, and family issues.

Specific Learning Objectives

- Upon satisfactory completion of the course, a student will be able to:
 - 1a. Factor a wide variety of polynomials using a variety of methods:
 - i. GCF(distributive property)
 - ii. Trial and error, or algorithmic development
 - iii. Grouping iv. Special products
 - 1b. Solve polynomial equations using factoring and the zero product property
 - 1c. Set up a solve a wide variety of application problems involving polynomial equations, particularly quadratic equations

- 2a. Add, subtract, multiply, divide, and simplify rational expressions (algebraic fractions) and be aware of the domain restrictions of the simplified expressions
- 2b. Simplify complex algebra fractions
- 2c. Solve equation involving rational expressions and be aware of the possibility of extraneous roots
- 2d. Model and solve applications problems involving rational equations and expressions
- 2e. Solve literal equations and deal with scientific formulae
- 2f. Solve problems involving proportions and variation
- 3a. Evaluate simplify, add, subtract, multiply and divide radical expressions
- 3b. Exploit the connection between radicals and rational exponents to simplify radical expressions
- 3c. Solve equations containing radical expressions
- 3d. Model and solve applications problems involving radical equations and expressions
- 3e. Solve quadratic equation by factoring, square roots, completing the square, and the quadratic formula
- 3f. Perform all the standard operations with complex number
- 4a. Explain the concepts of relation and function
- 4b. Work with functional notation, $f(x)$, in the context of linear and quadratic functions
- 4c. Explain what domain and range are in the context of simple relations and function

Course Requirements and assignment guidelines

If you don't have internet access at home, to get started on homework because you do not have a book, there are computer labs on campus.

Quizzes

Quizzes will be given regularly to ensure that you are keeping up with the readings, homework, and attending class. Missed quizzes cannot be made up, even if you arrive late to class.

Other assignments, as listed below, will occur in class and serve to reinforce learning:

- Homework. Collect only homework in your notebook for homework. Do every other odd-numbered problem in the sections we cover in class. Bring to class daily. Do not turn in unless specifically asked. Show the chapter and section number on each odd-numbered page. Show your reasoning/work unless the problem is trivial. Box in your answers. No late homework.
- Exams (the lowest grade will be dropped)
- Final
- Bring your textbook and supplies to class every time.

Late Assignments

No credit.

Grading

Assignment Category	# of Assign.	Points Per Assignment	Total Points	% of Total Grade
Quizzes	Approximately 25	2	50	5
Tests	5	100	500	60%

Final	1	300	300	35%
Homework	See quizzes	-	-	-
Grand Total	36	-	900	100%
90% = A	80% = B	60% = C	60% = D	Below 50% = F

Class Policies

Attendance

Because class discussions are an integral part of this course, attendance is mandatory. Up to 3 absences are allowed. After that, you could be dropped. Students are expected to attend every class meeting, to arrive on time and stay throughout the class period. **Excessive absenteeism, as well as walking in and out of class, will lower your grade through omission of extra credit.** 3 tardies = 1 absence. Students may be dropped from class for excessive tardiness, or for failure to attend class the first day.

Walking In and Out of Class

When you arrive to class, make sure you have used the restroom, had a chance to eat, check your messages, etc. Walking in and out is rude and disruptive. If you need to leave early, or have some other problem, you need to notify me in advance. **Any student who makes a habit of walking in and out of class may be asked to leave.**

Preparedness

You are expected to arrive on time. You will come to each class session prepared. You will have your book, notebooks, pens/pencils, any work that is due, and you will be prepared to discuss all past assignments.

Cell Phones, iPods, etc.

Turn them off and put them away when class begins! Although it may not seem possible, you can survive without talking and texting on your cell phone, or listening to your iPod, for a little over an hour. Talking and texting on cell phones not only distract you, but they are a distraction for me and your peers. Distractions interrupt/disrupt the class and I will not tolerate interruptions. **You will be asked to leave if this occurs.**

Contacting Me

E-mail is the best and quickest way to contact me. **If you have a problem, do not let it snowball. Contact me immediately.** Students are expected to ask questions and obtain help from instructor via email and/or during office hours.

For more information refer to the attached link:

http://www.wlac.edu/academics/pdf/WLAC_12-14Catalog_Policies.pdf

College Policies:

Academic Integrity (Plagiarism)

In accordance with code 9803.28, **academic dishonesty is prohibited and will not be tolerated in this class.** Violations of academic integrity include, but are not limited to, the following actions: cheating on an exam, plagiarism, working together on an assignment, paper or project when the instructor has specifically stated students should not do so, submitting the same term paper to more than one

instructor, or allowing another individual to assume one's identity for the purpose of enhancing one's grade. Academic dishonesty of any type, such as cheating or knowingly furnishing false information, by a student provides grounds for disciplinary action by the instructor or college. In written work, no material may be copied from another without proper quotation marks, footnotes, or appropriate documentation.

- **Plagiarism (cheating during an exam) will result in a zero for the assignment, possible dismissal from the class and disciplinary action from the college.**

Student Conduct

According to code 9803.15, disruption of classes or college activities is prohibited and will not be tolerated. Refer to the catalog and the Standards of Student Conduct in the Schedule of Classes for more information.

Recording Devices

State law in California prohibits the use of any electronic listening or recording device in a classroom without prior consent of the instructor and college administration. Any student who needs to use electronic aids must secure the consent of the instructor. If the instructor agrees to the request, a notice of consent must be forwarded to the Vice President of Academic Affairs for approval (WLAC College Catalog).

For more information refer to the attached link:

http://www.wlac.edu/academics/pdf/WLAC_12-14Catalog_Policies.pdf

Campus Resources

As stated earlier in this syllabus, **if you are having problems, don't let them snowball.** Come and talk with me and check out some of the campus resources available to you.

Office of Disabled Student Programs and Services (DSP&S)

Student Services Building (SSB) 320 | (310) 287-4450.

West Los Angeles College recognizes and welcomes its responsibility to provide an equal educational opportunity to all disabled individuals. The Office of Disabled Students Programs and Services (DSP&S) has been established to provide support services for all verified disabled students pursuing a college education. DSP&S students may qualify for: priority registration, registration assistance, special parking permits, sign language interpreters and assistive technology (WLAC College Catalog).

Instructional Support (Tutoring) & Learning Skills Center

Heldman Learning Resources Center (HLRC) | (310) 287-4486

Improve your reading, language, vocabulary, spelling, math fundamentals and chemistry knowledge with convenient, self-paced computer-aided courses in the Learning Skills Center. Increase your knowledge and learning success: sign up for tutoring in various college subjects (WLAC College Catalog).

Library Services

Heldman Learning Resources Center (HLRC) | (310) 287-4269 & (310) 287-4486

The WLAC Library provides instruction on how to use the online catalog, periodical and research databases. In addition to a large collection of books, periodicals and videos the WLAC Library has course textbooks which students may use while in the Library. Web access is available in LIRL as well as meeting rooms. The upper floors provide a beautiful view ideal for study (WLAC College Catalog).

For more information refer to attached link:

http://www.wlac.edu/academics/pdf/WLAC_12-14Catalog_Policies.pdf

NOTE: This syllabus and class schedule is subject to change if circumstances warrant it (e.g. student performance, etc.). **Expect revisions and divergences.**

Tentative schedule:

In the class textbook:	In my textbook
M 8-31: Review Optional meeting.	2: The Commutative, Associative, and Distributive Laws/Properties 3 Additional Properties of Real Numbers 4 Arithmetic of Signed Numbers 6 Positive and Negative Real Numbers, the Number Line 7 Order of Operations 8 Evaluating Expressions 8 Laws/Properties of Exponents 9 Solving Linear Equations by Addition/Subtraction 10 Solving Linear Equations by Multiplication/Division 211 Solving Linear Equations. Integer Problems 12 Solving Linear Equations. Coin and Stamp Problems 18 Translating Oral Expressions/ into Math 13 Solving Linear Equations. Integer Geometry 14 Solving Linear Equations. Commerce Problems 15 Solving Linear Equations. Investment Problems 16 Solving Linear Equations. Mixture Problems 17 Solving Linear Equations. Peed (Rate)-Distance-Time Problems 20 Applications with Percent 21 Solving Linear Inequalities and Applications 29 Polynomials 30 Addition and Subtraction of Polynomials 31 Multiplication of Polynomials 32 Special Products 33 Polynomials in several Variables 34 Division of Polynomials 35 Negative Exponents 36 Scientific Notation
T 9-01: 5.1: The GCF; factoring by grouping.	5 Fraction Notation and Percent 37 Factoring the Greatest Common Factor (GCF)
W 9-02: 5.2: Factoring Trinomials	39 Factoring Trinomials 38 Factoring binomials
Th 9-03: 5.3: More on Factoring Trinomials	
M 9-07: Holiday	
T 9-08: 5.4: Special Factoring Techniques	40 Factoring Perfect Square Trinomials 41 General Strategy for Factoring
W 9-09: 5.5: Solving Quadratic Equations Using the Zero Factor Property.	42 Solving Quadratic Equations by Factoring
Th 9-10: 5.6: Application of Quadratic Equations	43 Solving Application Problems by Factoring
M 9-14: Optional Review	
T 9-15: Test 1	
W 9-16: 6.1: The Fundamental Property of Rational Expressions	44 Rational Expressions
Th 9-17: 6.2: Multiplying and Dividing Rational	45 Multiplication and Division of Rational Expressions

Expressions	
M 9-21: Tutoring session.	
T 9-22: 6.3: The LCD	47 LCD of Rational Expressions
W 9-23: 6.4: Adding and Subtracting Rational Expressions	46 Addition and Subtraction of Rational Expressions with Like Denominators 48 Addition/Subtraction of Rational Expressions (Unlike Denominators)
Th 9-24: : 6.5: Complex Fractions	49 Complex Rational Expressions
M 9-28: Tutoring Session	
T 9-29: 6.6: Solving Equations with Rational Expressions	50 Solving Equations with Rational Expressions
W 9-30: 6.7: Applications of Rational Expressions	51 Solving Equations with Proportions
Th 10-01: Test 2	
M 10-05: Tutoring Session	
T 10-06: 7.1: Review of Graphs and Slopes of Lines	22 The Rectangular Coordinate System
W 10-07: 7.2: Review of Equations of Lines; Linear Models	23 Graphing Linear Equations and Intercepts 24 Rates/Slopes 25 Equations of a Line
Th 10-08: 7.3: Solving System of Linear Equations by Graphing	52 Solving Systems of Equations by Graphing
M 10-12: Tutoring Session	
T 10-13: 7.4: Solving Systems of Linear Equations by Substitution	53 Solving Systems of Equations by Substitution
W 10-14: 7.5: Solving Systems of Linear Equations by Elimination	54 Solving Systems of Equations by Elimination
Th 10-15: 7.6: Systems of Linear Equations in Three Variables	
M 10-19: Tutoring Session	
T 10-20: 7.7: Applications of Systems of Linear Equations	55 Systems of Application Problems Using Systems of Equations.
W 10-21: Test 3	
Th 10-22: 8.1: Review of Linear Inequalities in One Variable	56 Linear Inequalities in Two Variables 26 Graphing Linear Inequalities in Two variables
M 10-26 : Tutoring Session	
T 10-27: 8.2: Set Operations and Compound Inequalities	
W 10-28: 8.3: Absolute Value Equations and Inequalities	
Th 10-29: 8.4: Linear Inequalities and Systems in two Variables	
M 11-02: Tutoring Session	
T 11-03: Test 4	
W 11-04: 9.1: Introduction to Relations and Functions	27. Introduction to Functions
Th 11-05: 9.2: Function Notation and Linear Functions	
M 11-09: Tutoring Session	
T 11-10: 9.3: Polynomial Functions, Operations, and Composition	
W 11-11: Holiday	
Th 11-12: 9.4: Variation	57 Direct and Inverse Variation
M 11-16: Tutoring Session	19 Solving Formulas
T 11-17: Test 5	
W 11-18: 10.1: Radical	58 Introduction to (Square, cubic,) Roots and Radical

Expressions and Graphs	Expressions 63 Radical Expressions with Several Terms
Th 11-19: 10.2: Rational Exponents	66 Higher Roots and Radical Expressions
M 11-23: Tutoring Session	
T 11-24: 10.3: simplifying Radicals, the Distance Formula and Circles	59 Simplification of Radical Expressions
W 11-25: 10.4: Adding and Subtracting Rational Expressions	62 Adding and Subtracting Radicals
Th 11-26: Holiday	
M 11-30 : Tutoring Session	
T 12-01: 10.5: Multiplying and Dividing Radical Expressions	60 Multiplication/Division of Radical Expressions 61 Rationalizing the Denominator
W 12-02: 10.6: Solving Equations with Radicals	64 Solving Radical Equations 65 Application Problems Using Right Triangles and/or Radicals
Th 12-03: 10.7: Complex Numbers	72 Introduction to the Arithmetic of Complex Numbers
M 12-07 : Tutoring Session	
T 12-08: Review	
W 12-09: Review	
Th 12-10: Test 6	67 Solving Quadratic Equations Using the Square Root Property 68 Solving Equations by Completing the Square 69 The Quadratic Formula 73 Graphs of Quadratic Equations 70 Solving Application Problems Involving Quadratic Equations T1 Solving Formulas Involving Quadratics page 631
M 12-14:	Final. (Double check!) Thursday 1:45 ? Bring a Scantron to the final

West LA College Student Learning Outcomes		Quantitative Literacy	Critical Thinking	Communication	Technical Competence	Ethics
Math 123B Course SLOs	Math Program SLOs					
1. Perform operations involving rational and radical expressions, real and complex numbers, and function	Use mathematical tools essential for analyzing quantitative problems and for producing solutions	X	X			X
2. Use appropriate techniques to solve equations, including: linear and quadratic equations; equations involving radical or rational expressions or absolute value; and systems of linear equations.	Use mathematical tools essential for analyzing quantitative problems and for producing solutions.	X	X			X
3. Solve and graph linear and compound inequalities in two variables		X	X	X		X
4. Graph and analyze linear function		X	X	X	X	X
SLO ASSESSMENT Student achievement of SLOs will be assessed by means of tests as well as informal measures such as class participation, classwork, and student self-assessment						

