

MATH 3803 (91)

Algebra for P-8 Teachers

(Spring 2017)

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Office hours: 9:15-10:45 & 12:45-2 T, Th (Carrollton Campus)
11:30-1:30 F (Newnan Campus)

Textbook:

Billstein, R., Libeskind, S., & Lott, J. (2015). *A Problem solving approach to mathematics for elementary school teachers*, 12th Edition. Pearson Addison-Wesley: Boston, MA.

Goals and Objectives of the Course include, but not limited to,

- Explain the role of place value in the operations of decimal numbers and apply the idea in the computation.
- Convert terminating decimals to and from fractions and percents using the ideas of place value.
- Explain the difference between repeating and non-repeating nonterminating decimals and their connection to rational and irrational numbers and be able to convert repeating decimals to and from fractions.
- Be able to solve a system of linear equations to represent equations graphically, and to explain how the solution of a linear system can be interpreted geometrically.
- Explain the difference between quadratic functions and linear functions, be able to solve quadratic equations, and explain the relationship between equation and function graphs.
- Justify in what problem situations two quantities are proportional and use the proportional reasoning in problem solving.
- Explain difference between simple and compound interests and be able to apply the concepts in real life problem situations.

Attendance and Classroom Rules:

- Students should always attend class. Students are allowed to have **THREE** absences, including excused absences. More than 3 absences will result in no credit for the course.
- Students must be punctual. Attendance will be checked at the beginning of each class and students who are not present at that time will be recorded as absent.
- Students who disrupt the class for any reason will be escorted to outside of the classroom, disallowed to return for the day, and marked absent.
- Calculator is the only electronic device students can use in the classroom. **Calculator as a phone accessory is NOT allowed.** In fact, in no circumstance are students allowed to use any types of electronics other than calculators. Students who do not abide by this rule will be escorted to outside of the classroom, disallowed to return for the day, and marked absent.

Other University Rules: See <http://www.westga.edu/UWGSyllabusPolicies/>

Grading: The final grade in the course will be based on the performance on homework assignments (10 Points), 3 mid-term exams (20 points each) and a final exam (30 points), totaling 100 points.

- Homework will be assigned regularly and collected one week prior to each midterm exam.
- The homework grade will be based on the organization, completeness and correctness. Late homework won't be accepted.
- There will be 4 midterm tests and the lowest midterm score will be dropped. There will be no make-up exams in any case.
- If students miss the final exam, the final exam score will be 0, with no exception.

Grade Components and Dates

Final Course Grade

Homework:	10%		A	90-100
Midterm 1	20%*	Jan, 27	B	80-89.99
Midterm 2	20%*	March 3	C	70-79.99
Midterm 3	20%*	April 7	D	60-69.99
Midterm 4	20%*	April 28	F	Below 60
Final	30%	May 12 (9-11:30)		

* The lowest midterm will be dropped.

Tentative Schedule

Week	Topics	Materials
1 & 2	<ul style="list-style-type: none">• Rational Numbers• Addition and Subtraction with Real Numbers	Textbook-Ch. 6.1 & 6.2
3 & 4	<ul style="list-style-type: none">• Multiplication and Division with Real Numbers• Ratio & Proportion	Textbook-Ch. 6.3 & 6.4
5 & 6	<ul style="list-style-type: none">• Decimals and Percents• Operations with Decimals	Textbook-Ch. 7.1 & 7.2
7	No class (Conference presentation)	
8 & 9	<ul style="list-style-type: none">• Repeating Decimals• Percents and Interests	Textbook-Ch. 7.3 & 7.4
10 & 11	<ul style="list-style-type: none">• Real Numbers• Variables	Textbook-Ch. 8.1 & 8.2
12 & 13	<ul style="list-style-type: none">• Equations• Functions	Textbook-Ch. 8.3 & 8.4
14 & 15	<ul style="list-style-type: none">• Equations in a Cartesian Coordinate System	Textbook-Ch. 8.5
16	<ul style="list-style-type: none">• Final Exam	