

**MATH 0900 ELEMENTS OF ALGEBRA
FALL 2009**

**Section 007 Time MTWRF 11:30 – 12:20
Room: MWF BUS 214 TR GEO 105**

Instructor: Marie T. Donigan
Phone: 797:0595

Office: University Inn 103/137
E-mail: marie.donigan@usu.edu

Office Hrs.: MTWF 2:30-3:30, R 10:00 to 11:00 or by appointment

Course Objectives: This course presents elementary concepts of algebra and teaches basic algebra skills. It is intended to prepare students for Intermediate Algebra, a skills course required of most students for graduation from Utah State University.

Text: Beginning Algebra; (Lial/Hornsby/McGinnis) Tenth Edition

Topics Covered: Real Number Operations (Addition, Subtraction, Division, and Multiplication), Solving Linear Equations and Inequalities in One Variable, Linear Equations in Two Variables, Exponents, Factoring, Operations with Polynomials and with Rational Expressions, Various Types of Applications Problems, Equations of Lines, and Graphing Linear Inequalities in Two Variables.

Calculators: Calculators are **NOT ALLOWED** on tests. When you do your homework, it is recommended that you do not use your calculator. Use a calculator sparingly on application problems where numbers are large.

Tuesday & Thursday Classes: Heidi Wursten will be conducting Supplemental Instruction sessions on Tuesday and Thursday. These sessions will be most beneficial if you have done the previous days homework before attending. You will be able to ask questions and get clarification on concepts that are challenging to you. Attendance at these sessions is mandatory and will count toward your final attendance grade.

Attendance: Attendance in class is crucial. Class-time will be spent answering question about the homework and discussing new material. Students are encouraged to ask and answer questions and to participate in classroom discussions and activities. It should be noted that it is impossible to cover textbook material in the same depth that it is presented in the textbook itself. Students are expected to study the textbook to learn information not presented in class. Students who must miss class are responsible for contacting the instructor in advance, making arrangements to turn in assignments that are due, and getting notes from missed lectures. Students who miss class repeatedly or fail to consult with the instructor will be referred to the director, Nazih Al-Rashid.

Homework: Please see attached page that describes how your homework must be written up. Your three lowest homework scores will be dropped, and then your percent correct on the remaining assignments will serve as your homework score. Late homework will not be accepted except in extenuating circumstances (serious illness, for example). Each assignment is due on the next class meeting day after it is assigned. The homework will be worth 100 points.

Quizzes: Brief quizzes worth 10 points each will be given frequently and without prior announcement. The 10 best quiz scores will be counted.

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Tests: Four midterm exams and a comprehensive final exam will be given. Make-up exams will be given only in emergencies, and you must obtain prior consent from the instructor. Each midterm exam will be worth 100 points. The comprehensive final exam is on December 10 at 9:30 a.m. and is worth 200 points.

Test Corrections: All students are required to do corrections on every exam. These will be due one week after the exam is returned. The corrections consist of three parts: 1) the missed problem must be reworked correctly, 2) a brief written explanation of the error must be given, and 3) similar problems from a list I provide must be correctly worked. In the past, students have found this to be a valuable learning experience. It is also motivation to do well on the exam so that the correction process is minimized.

Grading Policy:	Attendance	100 points
	Homework	100 points
	Quizzes	100 points (10 points each)
	Tests	400 points (100 points each)
	Test Corrections	100 points (25 points each)
	Final Exam	200 points

Math 0900 is a pass/fail class. Students must accumulate at least 70% of the points possible over the semester in order to earn a “pass” in the course.

Students who fall below 70% accuracy on homework, quizzes, or exams are expected to meet individually with the instructor and/or get help from the math tutors. Studies have shown that studying with other students is also an effective way to increase your understanding of mathematics.

American with Disabilities Act: Title II of the Americans with Disabilities Act mandates that all State and Local Government programs be administered in such a manner as to protect qualified individuals with disabilities from discriminatory treatment. Utah State University complies with this policy, and therefore:

Students with disabilities who wish to receive accommodations in this class should contact the Disability Resource Center at 797-2444 during the first week of class so that warranted accommodations can be implemented in a timely fashion. The Disability Resource Center is located in room 101 of the University Inn. Special considerations must be discussed with and approved by the instructor.

Note: Elements of Algebra (Math 0900) is a remedial math course. Its three credit hours do not count toward graduation.

COURSE SCHEDULE

Day	Date	Section	Page	Assigned Problems
1	Aug 24	1.1 Fractions	11	1-6, 13, 19, 21, 24, 27, 31, 38, 39, 44, 47, 52,
2	Aug 25	1.1 Fractions	11	32, 56, 65, 68, 75, 77, 87, 89
3	Aug 28	1.2 Exponents, Order of Operations, and Inequalities	21	3, 6, 12, 18, 21, 27, 40, 45, 50, 57, 60, 63, 66, 72, 75, 81, 84, 87, 92, 93
4	Aug 31	1.3 Variables, Expressions, and Equations	29	3, 6, 7, 8, 12, 21, 24, 25, 27, 33, 42, 48, 54, 58, 60, 63, 72
		1.4 Real Numbers and the Number Line	38	11, 14, 17, 20, 30, 42, 54, 60, 63, 66, 69
5	Sept 2	1.5 Adding and Subtracting Real Numbers	48	6, 18, 27, 33, 36, 42, 54, 60, 63, 69, 72, 75, 77, 81, 87, 90, 96, 99, 105, 108, 111, 116, 118, 123, 126
6	Sept 4	1.6 Multiplying and Dividing Real Numbers	62	1, 3, 20, 29, 41, 44, 46, 48, 65, 72, 75, 83, 87, 91, 93, 99, 103, 111, 115, 121
7	Sept 9	1.7 Properties of Real Numbers	74	9, 18, 24, 27, 30, 31, 48, 51, 53, 54, 63, 73, 78, 84, 87
		1.8 Simplifying Expressions	80	2, 10, 19, 28, 36, 45, 48, 53, 59, 62, 70, 73, 76, 82, 85, 86, 87, 88
8	Sept 11	2.1 The Addition Property of Equality	100	3, 18, 21, 24, 33, 38, 39, 43, 52, 53, 56, 62, 68, 71
		2.2 The Multiplication Property of Equality	106	3, 5, 6, 21, 24, 33, 36, 39, 45, 48, 51, 62, 65, 68, 76
9	Sept 14	2.3 More on Solving Linear Equations	115	2, 3, 15, 18, 24, 26, 30, 36, 39, 42, 45, 48, 55, 61
10	Sept 16	REVIEW	93 186	Chapter 1 Test ALL Chapter 2 Test 1-5
11	Sept 18	EXAM 1 – YOU WILL BE TESTED ON SECTIONS 1.1-2.3		
12	Sept 21	2.4 An Intro. to Applications of Linear Equations	125	1, 6, 9, 18, 22, 33, 36, 39, 42, 45, 48, 54, 57, 60
		2.5 Geometry Formulas and Applications	137	2, 3, 8, 11, 17, 21, 29, 33, 48, 55, 60, 69, 72, 78, 81, 84
13	Sept 23	2.6 Ratios and Proportions	146	5, 10, 15, 18, 22, 27, 31, 36, 42, 49, 54, 61, 64, 67, 71
14	Sept 24	2.7 More about Problem Solving	157	2, 10, 13, 22, 25, 30, 33, 46, 54
15	Sept 28	2.8 Solving Linear Inequalities	172	2, 12, 19, 24, 30, 44, 54, 67, 74, 77, 82, 87, 91
16	Sept 30	3.1 Reading Graphs; Linear Equations in Two Variables	199	4, 7, 9, 12, 15, 21, 24, 30, 39, 42, 50, 56, 64, 70, 73, 76,
		3.2 Graphing Linear Equations in Two Variables	212	6, 9, 12, 18, 25, 30, 31, 41, 46, 56, 62, 67
17	Oct 2	3.3 The Slope of a Line	224	5, 8d, 11, 13, 18, 21, 25, 34, 44, 50, 51, 56, 59, 62, 68, 69, 72
18	Oct 5	3.4 Equations of a Line	237	3, 5, 12, 13, 15, 25, 32, 35, 36, 44, 48, 51, 54, 55, 56, 57, 58, 59, 60, 61, 62, 70
19	Oct 7	3.5 Graphing Linear Inequalities in Two Variables	247	6, 12, 15, 18, 24, 30, 33, 34, 35, 36
20	Oct 9	REVIEW	186 268	Chapter 2 Test 6 – 20 Chapter 3 Test 1 – 20

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21	Oct 12	EXAM 2 – YOU WILL BE TESTED ON SECTIONS 2.3-3.5		
22	Oct 14	5.1 The Product Rule and Power Rules of Exponents	333	3, 13, 18, 21, 24, 27, 30, 36, 38, 39, 42, 45, 48, 54, 62, 63, 66, 72, 75, 81, 82, 87
23	Oct 15	5.2 Integer Exponents and the Quotient Rule	342	7, 11, 14b, 14d, 19, 24, 36, 39, 42, 48, 51, 54, 60, 63, 66, 72, 75, 78
		5.3 Scientific Notation	350	1c, 4, 10, 16, 19, 27, 30, 33, 46, 74
24	Oct 19	5.4 Adding and Subtracting Polynomials	361	5, 10, 15, 20, 21, 35, 40, 45, 50, 60, 65, 80, 87
25	Oct 21	5.5 Multiplying Polynomials	369	3, 9, 12, 18, 21, 27, 30, 36, 39, 45, 48, 54, 60, 63, 69, 72, 87
		5.6 Special Products	375	1, 5, 13, 21, 26, 34, 57, 62, 69, 74, 77
26	Oct 23	5.7 Dividing Polynomials	384	3, 6, 12, 24, 33, 43, 46, 54, 58, 60, 68, 71, 77
27	Oct 26	6.1 Greatest Common Factor; Factoring by Grouping	406	8, 11, 14, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 61, 64, 67, 76, 82, 92
28	Oct 28	6.2 Factoring Trinomials	412	1, 10, 20, 23, 32, 40, 51, 56, 65, 73
29	Oct 30	6.3 More on Factoring Trinomials	419	8, 20, 30, 35, 40, 78, 83, 88, 93
30	Nov 2	6.4 Special Factoring Rules	428	5, 19, 24, 34, 39, 49, 56, 73, 74
		Summary	431	5, 7, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80
31	Nov 2	REVIEW	395 461	Chapter 5 Test ALL Chapter 6 Test 1- 20
32	Nov 4	EXAM 3 – YOU WILL BE TESTED ON SECTIONS 5.1-6.4		
33	Nov 6	6.5 Solving Quadratic Equations by Factoring	438	13, 22, 25, 29, 32, 38, 41, 47, 54, 57, 60, 61, 64, 70, 79, 83
34	Nov 11	7.1 Fundamental Property of Rational Expressions	473	4, 9, 13, 16, 23, 34, 37, 43, 63, 67, 77
		7.2 Multiplying and Dividing Rational Expressions	480	5, 15, 20, 25, 30, 40, 50, 55, 63
35	Nov 13	7.3 Least Common Denominators	486	5, 17, 26, 34, 39, 46, 55, 60, 65
		7.4 Adding and Subtracting Rational Expressions	494	2, 5, 21, 26, 33, 39, 49, 54, 64
36	Nov 16	7.5 Complex Fractions	502	3, 11, 15, 19, 23, 31
37	Nov 18	7.6 Solving Equations with Rational Expressions	511	2, 3, 12, 16, 21, 24, 27, 31, 33, 39, 42, 48, 58, 61, 68, 74, 80, 83
		7.7 Applications of Rational Expressions	521	3, 11, 19, 21, 33, 41
38	Nov 20	REVIEW	461	Chapter 6 Test 21-24 Chapter 7 Test 1-22
39	Nov 23	EXAM 4—YOU WILL BE TESTED ON SECTIONS 6.5-7.6		
40	Nov 30	REVIEW FOR FINAL EXAM		
41	Dec 2			
42	Dec 4			

Your final exam will be comprehensive. You will take the final exam at 11:30 a.m. on Friday, December 11.

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Math 0900 Written Homework Guidelines

- 1.) Any written work will be presented on 8.5x11 inch loose leaf paper (*not* torn from a loose-leaf or spiral binder). Paper carefully torn from notepads is acceptable.
- 2.) Name, class and section, date, and homework section number should appear in the upper right corner of each sheet.
- 3.) Homework is to be rigorously organized and ordered, with the mathematical progression of a problem indicated clearly through the use of appropriate relational symbols, spacing, and use of columnar formatting that reads from top to bottom and left to right.
- 4.) Only one problem may appear in each horizontal section (line) of your homework. Individual problems should be worked in columns.
- 5.) Show all the work necessary for each problem.
- 6.) If you make a mistake, please erase it. Do NOT “scratch” it out!!! If you write with a pen, use white-out (liquid paper) to erase your mistake.
- 7.) Leave two blank lines in between two different problems.
- 8.) Write big enough so your answer is readable.
- 9.) Make sure your complete answer to a problem appears on one side of a page. Do not begin an answer on one page and finish it on the back of the page or on another page.
- 10.) For each word problem, the conclusion should be given clearly and include units of measurement.
- 11.) Graphs are required to have labeled axes and/or captions.
- 12.) Obey the rules of punctuation and grammar.