MAT 095 CRN 12067 Spring 2011 Three Rivers Community College Norwich, CT 06360 Max Wentworth, Instructor, E-mail: mwentworth@trcc.commnet.edu, Phone Number: (860) 456-1804 Monday/Wednesday 3:30-4:45 Room D213/D215 Office Hours- Monday 11:30-12:30; Wednesday 5:00-6:00, Room D205E

Course Description

Through lecture and discussion of material, this course continues the development of algebraic concepts and skills.

Objectives

To give the student an understanding of and the ability to utilize the following: signed numbers, solving first-degree equations, exponents, polynomials, factoring, graphing, systems of linear equations, inequalities, radicals and scientific notation.

Procedure

There will be discussion of homework and new material will be presented each class. Questions are encouraged. Students may be asked to share their knowledge of a topic with the class.

Method of Evaluation

Quizzes 10% Take Home Assignments 20% Tests 40% Final 30%

Quizzes will be unannounced and at the beginning of class.

Take Home Assignments will be due one week after they are assigned. Students are encouraged to work together on take home assignments, but each student is responsible for understand the material. Late assignments will be accepted one class after they are due with 5 points taken off. A zero will assigned for any take home which is not handed in before or during the grace period.

Tests will be announced one week in advance. If you are going to be absent the day of a test, you **must** let me know, by email or phone **before or on that day**. Failure to do so will result in a zero for that test.

The **final** is comprehensive.

Attendance

Attendance is strongly encouraged.

Required Text

Beginning Algebra; Martin-Gay: Upper Saddle River, NJ; Pearson Prentice Hall; 2009; 5th edition.

Note: Students will need graph paper.

Grading

A 93-100 A- 90-92 B+ 87-89 B 83-86 B- 80-82 C+ 77-79 C 73-76 C- 70-72 D+ 67-69 D 63-66 D- 60-62 F below 60

Note: A grade of C or better is required to advance to Intermediate Algebra.

Course Outline

Sections	Topics
1.4 -1.8	Review of Real Numbers
Chapter 2	Equations, Inequalities and Problem Solving
Chapter 3	Graphing Equations
4.1-4.4	Solving Systems of Linear Equations
Chapter 5	Exponents and Polynomials
Chapter 6	Factoring Polynomials
8.1-8.2	Roots

Academic Integrity

Academic integrity is essential to a useful education. Failure to act with academic integrity severely limits a person's ability to succeed in the classroom and beyond. Furthermore, academic dishonesty erodes the legitimacy of every degree awarded by the College. In this class and in the course of your academic career, present only your own best work; and act at all times with honor.

Disabilities Statement

Students with Learning Disabilities should contact the Learning Specialist, Chris Scarborough at 860-892-5751 or at cscarborough@trcc.commnet.edu as soon as possible to ensure timely accommodations.

Students with Physical Disabilities should contact Judy Hilburger at 860-892-5744 or at jhilburger@trcc.commnet.edu or Matt Liscum at 860-383-5420 or via email at mliscum@trcc.commnet.edu to facilitate accommodations.

College Withdrawal Policy

Students may withdraw, at the Registrar's Office, for any reason on or before May 9, 2011.

Resources

Free tutoring is available at the Tutoring and Academic Success Center (TASC), Room C117. Please use this service as needed.

CELL PHONES MUST BE TURNED OFF DURING CLASS.

MAT095 Course Outcomes

- 1. Evaluate algebraic expressions
- 2. Determining if a given number is a solution to an equation or an inequality
- 3. Determining if an ordered pair is a solution to a linear equation in 2 variables
- 4. Add, subtract, multiply, and divide real numbers and raise a real number to an integer power
- 5. Add, subtract, multiply, and divide Polynomials
- 6. Simplify, add, subtract, multiply, and divide Radicals
- 7. Rules for Exponents
- 8. Greatest Common Factor (factoring)
- 9. Factor by Grouping
- 10. Factor trinomials of the form $x^2 + bx + c$
- 11. Factor trinomials of the form $ax^2 + bx + c$
- 12. Factor Perfect Square Trinomials
- 13. Factor the Difference of Two Squares
- 14. Factor Completely
- 15. Converting between Scientific Notation and standard notation
- 16. Order of Operations (manipulation)
- 17. Properties of Real Numbers (manipulation)
- 18. Simplifying Algebraic Expressions (manipulation)
- 19. Graphing in a Rectangular Coordinate System
- 20. Graphing Linear Equations by plotting points, using intercepts, and using the Slope-Intercept form
- **21.** Graphing the solution to a Linear Inequality in one variable.
- 22. Graphing a System of Linear Equations in two variables
- 23. Rates of change (slopes)
- 24. Identifying Linear Equations (Linearity)
- 25. Solving Linear Inequalities in one variable
- 26. Finding the Equation of a Line (manipulation)
- 27. Solving Linear Equations in one variable
- 28. Solving formulas for a specified variable
- 29. Solving a System of Linear Equations in two variables (two methods)
- 30. Solving equations with degree 2 or greater by factoring
- 31. Two forms for the equation of a line (transforming back and forth)
- 32. Finding an unknown number word problem
- 33. Solving consecutive numbers (including odd and even) word problems
- 34. Solving dimension problems using geometric formulas
- 35. Solving Percent and Mixture problems
- 36. Solving table problems such as rate, time, and distance
- 37. Solving linear inequality problems
- 38. Solving linear equation in two variables problems
- 39. Solving System of 2 linear equations in 2 variables word problems
- 40. Solving factorable Quadratic Equation word problems

Elementary Algebra Homework

Section **Exercise Numbers** 1.4 1, 9, 17, 19, 25, 27, 29, 33, 39, 41, 49, 53, 57, 59, 61, 66, 71, 77, 79, 81, 83, 87 1.5 1, 3, 13, 17, 29, 33, 39, 43, 51, 55, 57, 63, 65, 70, 71, 75, 76, 77, 81, 82 1.6 1, 7, 13, 15, 23, 27, 31, 38, 39, 43, 47, 49, 55, 57, 59, 63, 65, 72, 75, 79 1.7 1, 11, 15, 25, 33, 37, 43, 45, 47, 49, 53, 55, 63, 67, 71, 81, 93, 101, 109 2.1 3, 5, 11, 13, 17, 23, 25, 27, 31, 37, 41, 43, 51, 55, 57, 61, 63, 65 2.2 1, 7, 9, 13, 17, 19, 25, 27, 29, 31, 35, 39, 43, 45, 49, 51, 53, 57 2.3 1, 5, 7, 11, 15, 17, 21, 23, 27, 29, 35, 49, 53, 59, 61 2.4 1, 3, 7, 9, 13, 17, 19, 21, 24, 27, 41, 43, 49, 53, 59, 61, 67, 69, 71 2.5 1, 5, 6, 9, 13, 20, 21, 25, 36 2.6 1, 5, 17, 21, 24, 30, 31, 36, 37. 45, 51 2.7 4, 5, 9, 11, 13, 17, 19, 21, 23, 25, 27, 33, 35 2.8 5, 11, 13, 15, 17, 21, 23, 27, 37, 53, 57, 63, 67, 69, 74 2.9 11, 15, 17, 23, 29, 33, 39, 45, 57, 63, 71, 79 3.1 1, 3, 11, 19, 23, 25, 27, 33, 35, 37, 39, 43, 49, 50, 52, 55

- 3.2 1, 5, 8, 13, 19, 23, 27, 31, 33, 37, 45
- 3.2
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- 3.4 1, 3, 4, 9, 11, 13, 19, 31, 33, 47, 49, 51, 53, 56, 61, 69
- 3.5 1, 5, 9, 19, 21, 23, 28, 29, 33, 37, 41
- 3.6 3, 5, 9, 15, 16, 19, 19, 21, 31, 35, 37, 45, 47, 51, 61
- 4.1 1, 9, 15, 17, 19, 21, 31, 33, 37, 41
- 4.2 5, 9, 11, 17, 21, 25, 29, 31, 33
- 4.3 1, 5, 7, 13, 15, 19, 21, 25, 31
- 4.4 11, 17, 19, 23, 25, 29, 33, 33, 35, 36
- 5.1 1, 5, 6, 7, 11, 13, 21, 31, 35, 45, 51, 55, 57, 63, 105
- 5.2 1, 6, 7, 9, 12, 17, 19, 20, 23, 27, 29, 33, 34, 35, 39, 41, 43, 47, 51, 53, 59, 93, 103, 107
- 5.3 3, 7, 11, 13, 17, 23, 27, 29, 31, 39, 43, 57, 61, 67, 75, 83, 87
- 5.4 3, 9, 11, 17, 23, 25, 29, 41, 45, 47, 55, 57, 67, 75, 81, 91, 95, 101
- 5.5 1, 3, 5, 9, 11, 13, 15, 31, 33, 37, 43, 45, 55, 61, 65, 69, 81, 85, 91, 97, 103, 107, 117, 119
- 5.6 1, 5, 13, 15, 17, 19, 23, 27, 29, 35, 43, 47, 51
- 6.1 1, 5, 7, 9, 13, 15, 17, 19, 21, 23, 25, 29, 33, 35, 37, 41, 43, 54, 55, 65, 67, 71
- 6.2 1, 3, 5, 9, 11, 13, 15, 17, 21, 23, 25, 29, 33, 43, 49, 51, 53, 57, 59, 61, 69, 73, 83, 85, 87
- 6.3 1, 3, 9, 11, 13, 17, 19, 21, 23, 25, 29, 33, 37, 43, 45, 49, 55, 59, 63, 65, 67, 81, 87, 89, 91, 93, 95
- 6.4 1, 3, 5, 7, 9, 11, 13, 17, 19, 21, 23, 25, 27, 29, 33, 39, 41, 45, 47, 49, 51, 53, 57, 59, 65, 67, 69, 79, 81, 83, 85
- 6.5 1, 3, 5, 7, 11, 15, 17, 19, 21, 23, 25, 27, 29, 37, 39, 41, 43, 45, 47, 49, 53, 57, 59, 63, 65, 67, 69, 71, 75, 77, 81, 93
- Integrated Review EVER OTHER ODD
- 6.6 1, 3, 5, 7, 9, 11, 13, 15, 23, 25, 27, 37, 41, 59, 67, 77, 79
- 6.7 7, 9, 13, 15, 23, 25, 35, 37
- 8.1 1, 5, 9, 11, 15, 17, 19, 21, 27, 31, 35, 37, 39, 41, 43, 45, 55, 57, 59, 61, 63
- 8.2 1, 7, 11, 15, 19, 25, 27, 31, 33, 35, 41, 45, 46, 53, 55, 57, 59