

## **Math 075 –Pre-algebra – Number Sense, Geometry**

**Instructor:** Dr. George J. Rezendes  
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### **Course Description**

This course focuses on basic arithmetic and pre-algebra skills. Topics include whole numbers, fractions, decimal numbers, proportions, ratios, percents, perimeter, area, volume, applications, signed numbers, algebraic expressions and equations. This course does not count towards the minimum requirements for graduation.

### **Course Objectives:**

Chapter 1: Whole numbers. Introduction to Algebra (Section 1.8, 1.9)

At the completion of this course the student will be able to:

1. Evaluate exponential expressions.
2. Use the order of operations rule.
3. Evaluate algebraic expressions.
4. Translate sentences into variable expressions.

Chapter 2: Integers (Sections 2.1 – 2.5)

At the completion of this course the student will be able to:

1. Identify integers, opposite numbers.
2. Find the absolute value of a number.
3. Add, subtract, multiply, and divide integers.
4. Use the order of operations rule to evaluate algebraic expressions for integer values of variables.

Chapter 3: Equations (Sections 3.1 – 3.6)

At the completion of this course the student will be able to:

1. Use properties of numbers to combine like terms, multiply expressions, and simplify them.
2. Use addition and multiplication property of equality to solve equations.
3. Solve linear equations in one variable.
4. Use problem-solving steps to solve word problems.

Chapter 4: Equations (Sections 4.1 – 4.8)

At the completion of this course the student will be able to:

1. Identify the numerator and the denominator of fraction.
2. Identify proper, improper fractions, mixed numbers, and equivalent fractions.
3. Compare fractions to determine relative ordering.
4. Factor numbers.
5. Add, subtract, multiply, divide fractions, and mixed numbers.
6. Simplify complex fractions.
7. Solve equations containing fractions.

#### Chapter 5: Decimals (Sections 5.1 – 5.8)

At the completion of this course the student will be able to:

1. Know the meaning of place value for a decimal.
2. Write decimals in standard form.
3. Compare decimals to determine relative ordering.
4. Convert decimals to fractions and fractions to decimals.
5. Rounds decimals to a specified place value.
6. Add, subtract, multiply, divide decimals without the use of a calculator.
7. Solve equations containing decimals.
8. Understand the concept of square root.

#### Chapter 6: Ratio and Proportions (Sections 6.1 – 6.4)

At the completion of this course the student will be able to:

1. Simplify ratios, rates.
2. Write and solve proportions.
3. Use proportions for problem solving.

#### Chapter 7: Percents (Sections 7.1 – 7.6)

At the completion of this course the student will be able to:

1. Understand the meaning of percent.
2. Perform conversions of percents, decimals, and fractions.
3. Solve percent problems with percent equations, and with the percent proportions.

#### Chapter 9: Perimeter, Area and Volume (Sections 9.3 – 9.4)

At the completion of this course the student will be able to:

1. Find the perimeter, circumference of a given figure.
2. Find the area, volume of a given figure.

### **Text/Materials**

**Text:** K. Elayn Martin – Gay, *Prealgebra (Fourth Edition)*, Pearson Education 2004

**Software:** MyMathLab - [www.coursecompass.com](http://www.coursecompass.com) – courseid – rezendes74744

### **Teaching Methods**

1. Classroom Discussions: Important material from the text and outside sources will be covered in class. Attendance in class is extremely important and is expected. Students should plan to take careful notes as well as actively participating in classroom activities. Questions are crucial to students constructing their own understanding of course material and will be highly encouraged. Cognitive research has shown that the more questions students ask, the more ways the information will be index within memory thus improving recall and ultimately learning. Be engaged in class, participate and ask questions.
2. Assignments: Homework and preview assignments will be assigned each week. You are expected to do your homework regularly. You may be asked to periodically hand in your assignments.

3. Quizzes: There will be quizzes given each week that exams are not scheduled. No quiz make-ups are allowed. The lowest quiz score will be dropped.
4. Exams: Four equally weighted exams will be given during the semester. Each exam will be given in class. Make-up exams will be available only if prior arrangements are made with the instructor. The exams are tentatively scheduled for February 12<sup>th</sup>, March 12<sup>th</sup>, April 9<sup>th</sup>, and April 30<sup>th</sup>. The final exam will be a comprehensive final exam and will be administered on Monday May 14<sup>th</sup>.
5. Internet: All material will be distributed on the Internet using the WebCT Vista course management system which is located at <http://vista.ctdlc.org/webct/entryPageIns.dowebct>. Students are also encouraged to go to [www.coursecompass.com](http://www.coursecompass.com) –course id rezendes74744 to obtain additional course materials.

### Grading

The final course grade will be calculated using the following point distribution:

| Graded Activity                         | Percent of Grade |
|-----------------------------------------|------------------|
| Exams (4 – 15% each)                    | 60%              |
| Quizzes (9 – Lowest grade dropped -15%) | 15%              |
| Final Exam                              | 25%              |

Course grades will be assigned according to the following scale:

| Grade | Percent Score |
|-------|---------------|
| 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     | Less than 60  |

Note: Students must obtain a C or better in Math-075 to move on to Math-095.

## Course Policies

**Electronic Devices in Class:** Cellular phones, pagers, CD players, radios, and similar devices are prohibited in the classroom and laboratory facilities. Calculators are not allowed to be used during examinations and quizzes and as a matter of practice should not be used to complete homework assignments.

**Accommodations for Students with Special Needs:** Students with disabilities who may need academic accommodations should discuss options with Chris Scarborough, who is coordinating services for students with disabilities as well as with the instructor within the first two weeks of the beginning of class.

**Add/Drop Dates:** February 2, 2007 is the last day to withdraw and receive a partial tuition refund. January 25 is the last day to add a class without instructor permission. March 30, 2007 is the last day to drop this course or withdraw with a grade of “W” or switch to Audit or Pass/Fail. All changes must be done through the registrar’s office.

**Class Attendance:** Attendance in class is expected. Students having to miss class should notify the instructor in advance. The student is responsible for obtaining material distributed on class days when he/she is absent, this can be done by contacting a classmate who was present or by contacting the instructor. Missed quizzes can not be made up but one quiz score (lowest score) will be dropped at the end of the semester.

**Posting of Grades:** Final grades will be available online at [www.online.commnet.edu](http://www.online.commnet.edu) as well as within WebCT Vista.

**Class Cancellations:** If there is a concern about class being cancelled due to weather a class email will be sent within WebCT Vista to all students, a message will be posted on the instructor’s voice mail, (860) 892-5774, and an announcement will be posted to the MyMathLab course at [www.coursecompass.com](http://www.coursecompass.com) –course id rezendes74744.