Math 70 – Algebra Review

Learning Community
Co-enrollments with GSCI 104 required
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Required Materials
Text: Intermediate Algebra, a Just in Time Approach 4th edition
        By Alice Kaseberg
        Chapter 1 – 4
Workbook: Student Workbook for Kaseberg's Intermediate Algebra 3rd edition
MISC: Graph paper and a ruler
GRAPHING CALCULATOR REQUIRED, (TI83+or TI84+) RECOMMENDED

Algebra Review is a very fast paced course designed to review the topics of beginning algebra and elementary problem solving. This course focuses on the central ideas of Algebra: introduction to the concept of function, introduction to graphs, equations, inequalities, absolute value, systems, and the process of translating and interpreting application problems. The functions studied include constant, linear, and quadratic functions. Other topics are function notation, polynomial arithmetic, set and interval notation. We will also become proficient in the use of the TI83/84 graphing calculator. This course will be linked with GSCI 104 – Physical Science Physics and co-enrollment will be required. Mandatory Field Trip Excursion, July 28-August 2 to Central Oregon including the John Day Fossil Bed and Newberry Crater Volcanic National Monuments, Pine Mountain Observatory, SkydiveCentralOregon, and Crater Lake National Park (with GSCI 106 Geology and GSCI 107 Astronomy). $100 fee (pay only once for any or all courses).

This class may seem to be covering a great deal of material. This is understandable since it reviews the material from most of two years of high school algebra. Regular study and prompt completion of homework is absolutely necessary to succeed in this or any other math class. MATH IS NOT A SPECTATOR SPORT!
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There will be daily homework for each section consisting of problems from the text, worksheets with applications from physics and calculator skills worksheets. Text homework must be written up completely and neatly. I will not accept late homework. Homework will be converted to a percentage score with a value of up to 100 total points possible for text exercises and calculator worksheets. The completed workbook will be worth 50 points. There will be a portfolio containing lab write-ups and other activities worth 100 points. There will be four chapter tests – 100 points each. There is also a comprehensive calculator skills assessment worth 100 points. I do not offer make-up tests or extra credit. Tests not done on the scheduled day, if allowed, are subject to a 10% per school day penalty for each day they are taken late. There is also a comprehensive final worth 250 points. The grades will be determined as follows: 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…60-69%, and F less than 60%.

GETTING HELP- The Math Lab, located in BH 7, is available at no charge to all registered students. Qualified tutors provide one-to-one help and calculators, computers, textbooks, and student solution guides are available for use in the Lab. Please sign in and out each time you use the Lab. Hours will be posted outside of the lab.

Course Outcomes: Math 70 Algebra Review, 5-credits

Algebra Review is a fast paced course designed to review the topics of beginning algebra and elementary problem solving. *(This information is not approached as an introduction but with a higher degree of difficulty than a beginning algebra course.)*

EXPECTED LEARNER EXIT REQUIREMENTS/OUTCOMES:
Upon completion of Math 70 Algebra Review the student/learner must be able to:
Solve Linear Equations, formulas, Graph Linear equations, and their Applications   Methods: applying properties of equality, point-plotting, intercepts, slope, slope-y-intercept, point-and problem solving strategies
Solve Linear Inequalities, Absolute Value Equations and Absolute Value Inequalities   Methods: applying the definition of absolute value with the properties of equality and inequality, express inequality solutions as a graph and in interval and set notation
Explain the concepts of Function, Domain and Range, Use Function Notation and Graph Functions   Methods: write a paraphrase of the definitions, draw diagrams, point-plotting, transformations determine domain and range, possible equation types: linear, quadratic, absolute value, piece-wise
Perform 0perations on Polynomials, Factor Polynomials and Solve Polynomial Equations, and their Applications   Methods: applying order of operations, factoring strategies, properties of equality and problem solving strategies (such as modeling)
Departmental Assessment: Comprehensive Final

Calculator outcomes:

By the end of the course students should be able to do the following:
- Perform basics calculator operations.
- Use the calculator to construct tables.
- Graphically solve equations and inequalities.
- Demonstrate the ability to perform basic statistical operations such as plotting paired data, frequency distributions and lines of best fit.
- Enter and execute simple programs.