

# **RICHLAND COMMUNITY COLLEGE**

## **Mathematics and Sciences Division**

### **Course Syllabus**

#### **Course Title**

Intermediate Algebra – Part I

#### **Course Number**

098A

#### **Course Credit Line**

2-0-2

#### **Semester and year**

Spring Semester, 2011 --begins 01/18/2011 ends 03/11/1011

#### **Section number and Days and Times of Course**

01 11:00 - 11:50 am -- M, T, Th, F This class is web enhanced.

02 1:00 – 1:50 am -- M, T, Th, F This class is web enhanced

#### **Room**

S-143

#### **Name of Instructor**

Professor Jon Odell

#### **Office phone of Instructor**

217-875-7200 – Extension 486  
or 217-875-7211-486 for direct

#### **E mail address of Instructor**

[www.jodell@richland.cc.il.us](mailto:www.jodell@richland.cc.il.us)

## **Office hours of Instructor**

Office hours will be announced by the instructor and should be noted by the student.

**Warning:** If you miss more than two consecutive classes without contacting me, I will no longer consider you a part of the class. You may contact me using e-mail or leaving a phone message. This does not mean you have withdrawn. You **CANNOT** withdraw simply by not attending. You will receive an F on your transcript unless you formally withdraw at the Registrar's Office. Avoid an unnecessary failure on your permanent record.

## **Text**

### **Title**

Beginning & Intermediate Algebra; Fourth Edition

### **Author(s)**

Elayn Martin-Gay

### **Publisher**

Pearson, Addison Wesley

### **Date published**

2009

## **Required Software – MyMathLab**

**Recommended – Martin-gay's Interactive Video Lectures** (found in MyMathLab or Richland library)

**Recommended – Video test prep** – (comes with textbook)

## **Recommended Student Supplements**

**Title** Student Solutions Manual Beginning & Intermediate Algebra

**Author(s)** Gay and Greene

**Publisher** Pearson, Addison Wesley

**Year Published** 2009

## **Course Prerequisite**

(Prerequisite: **all of the following**: (1) Math. 091 (completed with a C or above) OR – completion with a C or better both Mathematics 091A and Mathematics 091B, or satisfactory score on the mathematics placement exam, **AND** (2) Math. 095 (completed with a C or above) or one year of high school geometry, **AND** (3) eligibility for Engl. 101 or concurrent enrollment in Engl. 090 and 091)

**Note: Any student found not meeting the prerequisite will be withdrawn from the course, regardless of the date of the course and regardless of the student's grade.**

**Note that a grade of incomplete in a prerequisite fails to meet the qualifications of meeting the prerequisite, and the student found with an incomplete will be withdrawn from the course.**

### **Course Description**

Intermediate Algebra, Mathematics 098

is designed for (1) students who have successfully completed two years of high school algebra or (2) students who need to review Intermediate Algebra concepts. The topics include a review of real numbers, polynomials, linear equations, factoring, solving quadratic equations by factoring and systems of equations. The course concentrates on rational expressions, rational equations, inequalities, problem solving, graphing, functions, and relations and equations of lines. A graphing calculator is required.

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.L.S.

Group Requirement - Not Applicable

Area of Concentration - Not Applicable

### **Illinois Mathematical Association of Community Colleges (IMACC) Description**

The course is designed to be a second course in Algebra. Students must earn a grade of "C" or better in order to progress to transfer-level mathematics courses. Although emphasis should be on techniques and manipulations, problem solving and logical reasoning should be a main thread throughout the course. Much effort should be given to utilize instruction that will provide students with needed techniques and also enable students to reason and make the connections that are involved in the learning of mathematics. The instruction should emphasize the connections between verbal, numerical, symbolic and graphical representation of the concepts being taught wherever possible. The appropriate use of technology, such as a graphing calculator, is strongly encouraged.

## **Required Equipment for Course**

### **GRAPHING CALCULATOR REQUIRED**

A graphing calculator is **required** for the course.

The Texas Instruments TI-84 Plus or TI-84 or TI-83 plus Silver Edition or TI-83 Plus are recommended. A TI-83 or TI-82 will be satisfactory. The instructor may provide students with programs for these calculators, but is not able to provide programs for other kinds of calculators. The instructor will not be able to provide assistance with other makes of calculators and some other calculators do not have all the necessary functions necessary for the classroom activities. The tutors in the Student Learning Center have been trained in the use of these recommended calculators.

### **THE STUDENT IS TO BRING THE GRAPHING CALCULATOR TO ALL CLASS MEETINGS.**

The graphing calculator will be an integral part of the learning process. The student will be given homework and examinations, which will require its use.

A video on the use of the graphing calculator is available on reserve in the Learning Resource Center (library) and also the Student Learning Center.

The student is highly encouraged to copy the serial number of the calculator and write their name on the calculator with a permanent marker.

## **THIS IS A WEB ENHANCED COURSE**

- Students who take this course **must be self disciplined!**
- The instructor will not reply to questions for which the answers are already in existence.
- The rules on this course syllabus will not change.
- Always send an e-mail to the instructor's Richland address (do not click on reply).
- All the times on the Course Compass of My Math Lab are Eastern times.

## **Grading Policy Web Enhanced Course**

There will be a Test for the review content, which will be using MyMathLab, which uses computer testing.

There will be at least one Quiz for each chapter and review content using MyMathLab.

There will be homework assigned which will be done using My Math Lab, which uses computer testing.

There will be a comprehensive final examination.

The instructor may have a series of “quizzes” or study sheets over the semester that will be done using paper and pencil.

**Chapter Tests will be 100 points each done on My Math Lab**  
**MyMathLab quizzes are worth 20 points each**  
**MyMathLab Homework is worth 10 points a section**  
**Final examination will be 100 points and done in class**  
**Other written work point value will be announced**

## **RULES FOR Web Enhanced COURSE**

- **Students must attend class.**
- **Students who do not take the final examination will automatically receive an F for the course.**
- **Students who miss 2 chapter tests will be withdrawn administratively.**
- **The deadlines for chapter tests will not change.**
- **The deadline for the final examination will not change.**
- **Students who have obtained a used textbook for this course must purchase the access code separately (from the publisher or the RCC bookstore.)**
- **If you miss a test for any reason the grade for that test will be zero.**
- **The time for taking a test (or homework) will expire at 11:59 Central time. Make sure you give yourself enough time to submit your examination before the deadline.**
- **One should strive for a minimum of 70% on a chapter test, and work to enhance that grade.**
- **The student will have three chances to take any chapter test before the deadline of the test.**

- **The homework on My Math Lab utilizes many help features and the student should use these as needed. One should be consistently getting over 90% on homework.**
- **All deadlines for My Math Lab homework and tests can be found on My Math Lab.**
- **All work on MyMathLab is cumulative and requires 70% to advance to the next assignment/quiz/test.**
- **After each MyMathLab test, the 70% requirement begins again with the new chapter.**
  
- **Tests Using MyMathLab**
  - **3 chances**
  - **No Helps from MyMathLab**
  - **180 Minutes for test – time remaining is shown on test.**
  - **If computer stops, or you quit, you have to start over on all questions**
  - **Allow time to get done –**
  - **DO NOT WAIT UNTIL DEADLINE!**
  - **You may do test wherever you desire.**
  - **You may use notes, books and graphing calculator on test.**
  - **It is highly advised that you keep a written record of what is done on problems taking a test.**
  - **Failure to take a test results in a grade of 0 for the test.**
  - **Tests are worth 100 points and there is a test for each chapter covered in the course.**
  - **The highest score is counted**
  - **You cannot take test until you had 70% on quiz.**

- **Quizzes**
  - **Unlimited chances**
  - **No Helps from MyMathLab**
  - **120 minutes for quiz**
  - **You have to get a 70% on Quiz to take the chapter test if chapter test is done using MyMathLab.**
  - **You may take test anywhere**
  - **DO NOT WAIT UNTIL THE DEADLINE**
  - **Keep a written record of what is done.**
  - **Quizzes normally consist of 20 questions and are worth 20 points**
  - **Partial credit is given on some multipart questions**
  - **The highest score is counted**

### **Homework**

- **Homework is worth 10 points for each MyMathLab assignment**
- **Homework has many helps from MyMathLab including helps on how to do a problem, videos, power points, textbook material among others**
- **One has three opportunities to do a problem. After that, one can ask to see a similar problem, and MyMathLab will generate a similar problem. This is a powerful feature and should be used.**
- **The biggest mistakes students make is failing to read instructions and failure to input answers as called for in the instructions.**
- **One can leave homework and come back to it. If the homework answer has been checked and determined to be correct, MyMathLab will remember.**
- **One has unlimited opportunities to work on homework.**

- **There are dates for homework to be done. The student may submit homework after the deadline until the date of the respective chapter examination.**
- **Homework may be printed.**

### **Media Assignments**

- **video assignments - 1 point**
- **power point assignments - 1 point**
- **animation assignments - 1 point**
- **Serve as prerequisites for some assignments**
- **Can be done in any order**

### **Notes**

**After class presentations on subjects, students will complete worksheets to assist in studying the material. These are to be submitted the next class meeting. Late submissions are discouraged as they generally will not be accepted or receive a deduction..**

**Notes will receive points that will be added to the grade sheet of MyMathLab after the appropriate test for related material.**

**Students who do the worksheets will find they are much better prepared to do homework and quizzes and tests.**

**Do the worksheet before the homework on MyMathLab**



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## **Receiving Below 70% on a MyMathLab Test**

**All Students are required to spend 4 hours in the MEC before the first MyMathLab Test.**

**For each hour that is short of the 4 hours, the student will have 10 points removed from their test score. For example, 2.9 hours is short of 3, so 20 points would be deducted from the MyMathLab test score. 1.9 is short of 2 so 30 points would be deducted. And 0.9 hours is short of 1 so 40 points would be deducted.**

**All students who receive below 70% on any examination on MyMathLab will be expected to spend 4 hours in the Mathematics Enrichment Center (MEC) during the time until the next MyMath Lab test. This 70% applies after the deadline for the test, and not necessarily the first time the test is taken.**

**Failure to meet the 4 hours requirement will result in 10 points removed from the MyMathLab test score for each hour short of the required hours.**

### **Things to Know**

1. If you think this course is too difficult for you, take care of this as soon as possible by talking to the instructor about options.
2. Get registered in MyMathLab ASAP since assignments start at the beginning of the semester.
3. If you do not meet the prerequisite for the course, you will be automatically dropped.
4. Tutoring for Mathematics and MyMathLab is available in the Student Learning Center.

**\*\*\*\*\* 5. IF YOU DROP THE COURSE, YOUR MYMATHLAB ACCOUNT FOR THE COURSE WILL BE MADE INACTIVE!**

## MyMathLab

**MyMathLab is an online program with many tools to help you be successful in your mathematics class.**

- Homework problems with help when you need it and instant feedback.
- Power point presentations built into the program
- Test reviews
- Study Plan – take a practice test and the study plan will give you a list of problems you need to work on.
- Electronic version of the book available
- Videos for every lesson
- Solutions manual to book problems
- Your grade overall
- Your grade for the different components including homework, chapter tests, and written work

### Getting Started with MyMathLab (MML)

#### **What you need to get started:**

- ❑ Access to a computer with high-speed (DSL or cable) Internet. The Study Center, the Learning Resource Center, and computer labs at RCC meet this requirement.
- ❑ Course ID – provided by your instructor \_\_\_\_\_
- ❑ MyMathLab student access code (in the Student Access Kit packaged with your new text or available for purchase online with credit card)
- ❑ Your School's zip code        62551
- ❑ Valid email address that you will check regularly **USE YOUR COLLEGE (RICHLAND)'S E MAIL ADDRESS.**

## **First Time user Registration:**

1. Got to <http://www.coursecompass.com> and under Students, click the Register button.
2. Follow the instructions to register for your course. You will be asked for several items. See the box above.
3. Login name: \_\_\_\_\_
4. Password: \_\_\_\_\_

**Remember your password!!!!**

## **Returning User Registration:**

You do **NOT** need to buy a new student access code when you enroll in another MyMathLab course that uses the exact same textbook as a previous course. In the following cases, you only need a new Course ID from your instructor:

- You are enrolling in the next class in a sequence of courses that use the same text
- You are switching to a different section of the same course
- You are retaking the same course

1. Log in to <http://www.coursecompass.com>
2. Click **Enroll in Another Course** in the Courses area.

Note: You may have to go to your Account Summary <https://register.pearsoncmg.com/userprofile>), log in and click **Enroll in a Course**.

3. Enter the **Course ID** you received from your instructor for your new course, and click **Find Course**.
4. Follow the on-screen instructions to continue the enrollment process. If the new course uses a different textbook, you will choose to access the course by either using a student access code or buying access online.

## To Log In:

Go to [www.coursecompass.com](http://www.coursecompass.com), click the **Log in** button, enter your **login name** and **password** and click **Log In**.

## Helpful Information – Accessing the Program

1. If the CourseCompass website is down, try [www.mathxl.com](http://www.mathxl.com). This is called the Backdoor. It will look a little different but still allows you to do your homework. The e-book is not available in the Backdoor.
2. The first time you enter the site from your personal computer **and** anytime you use a new computer off-campus, click on **Installation Wizard**. (Note: You do not need to do this on the RCC study Center computers or other computers at RCC. Follow on-screen instruction to install software needed to use MyMathLab.
3. For Tech Support, visit [http://mymathlab.com/contactus\\_stu.html](http://mymathlab.com/contactus_stu.html)

## 4.or call tech support 1-800-677-6337

## Helpful Information – Working in the program.

1. **Do your work on paper**, number each problem like you would if you were doing book homework. You will have to show work on texts done in class so it is important to practice that during homework.
2. Pay attention to the **format** your answer is to be provided. Instructions in MML are normally specific if answer is to be as a fraction or decimal, and how many decimals are required. If one item is wrong, the entire answer is wrong. It is not a person; it's just a computer.
3. You get **several tries** for a problem; If you get it wrong 3 times and want a new problem, click **Similar Problem**. You can do this over and over until you get 100% if you like.
4. If you ever want to redo problems, even ones you did not do before the due date, click **Gradebook**. Next to each assignment is the link **Review**. Choose it to redo problems but your score will not change.

5. MML is always saving your work, but just to be safe, click **Save after you're done**.
6. You can stop anywhere during a homework assignment, log out, and come back to the same problem. You cannot do this for practice tests or actual MML tests. If you log out and come back during a test, it will start the test over.
7. You can **Print** an assignment, work it on paper, and enter the answers in the computer when you have time. Having printed assignments and getting help from the study assistance center is an excellent idea.
8. You can keep working on homework and improving your score until it is due.

### **Homework Specifics**

1. Homework is due on specific dates. The dates are after the teacher presentation.
2. Students should do homework as soon as possible after the classroom presentation as is possible.
3. Homework has unlimited opportunities for success and no time limit on how long one can work on a specific homework assignment. One can leave homework and come back to it.
4. Homework may be worked on after the due date.
5. Most homework assignments will have a prerequisite of having obtained 70% on the previous homework before you can start the new homework assignment. 70% is easily obtainable and most students obtain over 90% if they put in time.
6. Students should expect to spend at least 2 to 3 hours outside of class for every hour inside of class on assignments.

### **MML Test and Quiz Specifics**

1. There will be specific deadlines and specific prerequisites for MML tests and quizzes
2. MML tests will have 3 chances to take the test.
3. MML tests will have a time limit of 180 minutes. Most students get the test done in 30 to 90 minutes.
4. If you log out of a test, you have to start completely over.
5. Tests on MML will have a prerequisite of 70% on appropriate homework

6. There are no help screens for the test.
7. Quizzes on MML have 120 minute time limits
8. Quizzes on MML have unlimited times to attempt
9. Quizzes on MML normally have 20 questions.
10. Quizzes on MML have a prerequisite of 70% on previous homework
11. Quizzes on MML are excellent preparation for an examination, regardless if in class or on MML.
12. MML Tests may have questions on previous material.
13. MML uses the highest score of quiz or test if the quiz or test is retaken

### **Methods of Instruction**

The students will be using technology (My Math Lab program) to learn mathematical concepts, practice, to do homework and take assigned chapter tests.

Additional help is available from the instructor or from the study center or the Mathematics Enrichment Center.

During the class period, the instructor will concentrate on those items not covered in as much depth by either the text or My Math Lab. The use of the graphing calculator will be reviewed during class time.

It is essential that the student be extremely self-disciplined. It is easy to get behind in this course and very difficult to catch up.

The student is responsible for all deadlines.

## Course Objectives/Outcomes:

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### Mathematics 098A

The following will be reviewed very briefly and the student is expected to have this knowledge

- Perform arithmetic operations with real numbers, , and algebraic expressions including polynomials,
- Solve systems of linear equations in two and three variables
- Write equations of lines and determine if lines are parallel or perpendicular
- Solve linear equations
- Factor polynomials, including binomials and trinomials, and identify prime polynomials
- Solve applications involving linear equations and systems of equations

The following represent the concentration of course objectives/outcomes

- Simplify, multiply, divide, and add rational expressions.
- Solve rational equations
- Solve linear inequalities and compound inequalities in one and two variables
- Identify and solve applications involving direct, inverse, and or joint variation
- Use graphs to identify solutions to linear equations and inequalities in one and two variables and systems of linear inequalities.
- Solve applications involving inequalities, rational equations
- Use functional notation, graphing nonlinear functions, and use the graphing calculator appropriately.

### Course Content (IMACC)

- Solve linear equations and inequalities including absolute value equation and inequalities.
- Graph linear and non-linear equations including applications
- Introduction to functions, identifying range and domain, and graphing functions, including linear, quadratic, and absolute value
- Write equations of lines.
- Operations involving rational expressions; solving rational equations and applications

#### Review

- Operations with polynomials, factoring polynomials, solving quadratic equations and applications
- Solve systems of linear equations and applications in two and three variables

**Attention to be given to the following:**

- The active involvement of students in solving real multi-step mathematics problems.
- The introduction of needed skills in the context of real applications.
- Mental arithmetic, estimation, and the translation of problem situations into algebraic models.
- The integration of mathematical topics so that students may use a wide range of mathematical content and techniques to solve problems.
- The conceptual understanding of mathematical ideas and the ability to use valid arguments.
- The appropriate use of technology throughout the curriculum for computational work, graphing, and geometry.
- The integration of interactive learning involving collaborative groups.
- The application of multiple approaches (numerical, graphical, symbolic, and verbal) to help the student learn a variety of techniques for solving problems.



## **Topical Outline**

### INTERMEDIATE ALGEBRA

Topics to be covered (not necessarily in this order) :

Review

1. Basic Properties and Definitions - Review
2. Coordinate plane, Functions and graphing
3. Linear Equations
4. Polynomials
5. Factoring and solving quadratic equations by factoring

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Covered extensively

6. Rational Expressions
7. Rational Equations
8. Compound Inequalities
9. Absolute value equations and inequalities
10. Functions, domains and ranges
11. Use of graphing calculator to graph functions and evaluate
12. Direct, inverse and joint variation

Final Examination (Comprehensive)

**NOTE:** The amount of time on each topic may vary from the estimated time as certain topics may require additional or less emphasis based on the individual instructor's evaluation of class progress and mastery of the material.

The instructor will announce the amount of time spent on examinations.

## Learning Objectives – (IMACC)

- Perform arithmetic operations with real numbers, and algebraic expressions including polynomials, and rational expressions
- Solve linear, rational, absolute value, equations in one and two variables with applications of domain and range
- Solve linear inequalities and compound inequalities in one and two variables
- Factor polynomials, including binomials and trinomials, and identify prime polynomials
- Write equations of lines and determine if lines are parallel or perpendicular
- Use graphs to identify solutions to linear equations and inequalities in one and two variables, as well as systems of equations and inequalities in two variables
- Solve systems of linear equations in two and three variables
- Graph quadratic functions
- Solve applications involving linear expressions, equations and inequalities, rational equations,
- Identify and solve applications involving direct, inverse, and or joint variation.

## Course Outcomes

1. Demonstrate and apply a **knowledge and sense of numbers**, including numeration and operations including subtraction, multiplication, and division.
  - a. Identify and apply the associative, commutative, distributive, identity and inverse properties of real numbers.
  - b. Understand the relationship between the natural, whole, integers, rational, irrational, and real number systems.
  - c. Understand the rules of exponents and be able to apply them to algebraic relationships, in/with both symbolical manipulation and applied problems.
  - d. Represent numbers in scientific notation and be able to understand a graphing calculator's utilization of scientific notation.
  - e. Calculate accurately using positive and negative numbers found in the real number system.
2. Use algebraic and analytical methods to **identify and describe patterns and relationships in data, solve problems, and predict results**.
  - a. Represent mathematical patterns and describe their properties using variables and mathematical symbols.
  - b. Represent algebraic concepts with words, diagrams, tables, graphs, equations, and inequalities and use the appropriate technology.
  - c. Understand patterns, relations, and functions.
  - d. Use the basic functions of absolute value, square root, linear, and quadratic to describe algebraic relationships.
  - e. Formulate and solve linear and quadratic equations and linear inequalities algebraically and investigate nonlinear inequalities using graphs, tables, and technology including graphing calculators.

3. Identify and use various **problem-solving strategies**.
  - a. Utilize the rule of three including the use of numerical, graphical and symbolic solving methodologies.
  - b. Utilize communication both verbal and written to explain how the rule of three is being utilized.
  - c. Utilize a variety of problems solving strategies and not limit oneself to purely symbolical manipulation of algebraic symbols.
  - d. Build new mathematical knowledge through problem solving.
  - e. Apply and adapt a variety of appropriate strategies to solve problems.
  - f. Monitor and reflect on the process of mathematical problem solving.
  - g. Recognize reasoning and proof as fundamental aspects of mathematics.
  
4. **Interpret numerical and graphical data** to solve mathematical problems.
  - a. Analyze the graphing of lines, identifying characteristics including slope and the various algebraic forms of lines..
  - b. Graphically analyze a system of two linear equations.
  - c. Graphically analyze a system of two linear inequalities.
  
5. **Manipulate mathematical equations and expressions symbolically**.
  - a. Solve first-degree equations.
  - b. Solve first-degree inequalities.
  - c. Solve first-degree absolute value equations.
  - d. Solve first-degree absolute value inequalities.
  - e. Simplify addition, subtraction, multiplication, and division of rational expressions including complex rational expressions.
  - f. Solve rational equations.
  - g. Solve systems of linear equations using elimination and substitution including 2 equations and 2 unknowns and 3 equations and 3 unknowns.
  - h. Evaluate functions, Determine the value of a common logarithm and natural logarithm.
  
6. Use **technology** appropriately in problem solving and in exploring and developing mathematical concepts.
  - a. Accurately do basic scientific calculator calculations.
  - b. Determine an appropriate viewing window for a graph.
  - c. Graph using a graphing calculator.
  - d. Interpret the graph in terms of the problem situation.
  - e. Determine a root of a function graphically.
  - f. Determine the intersection of two graphs by using graphing technology.
  - g. Evaluate a function using graphing technology.
  
7. Identify, develop and solve problems related to **real world situations**.
  - a. Utilize symbolical, numerical, and graphical methods to solve problems related to real world situations.
  - b. Explain the methodology of solutions to real world situations.
  - c. Interpret the limitations of mathematical models.

- d. Organize and consolidate mathematical thinking through communication.
- e. Use the language of mathematics to express mathematical ideas precisely.
- f. Recognize and use connections among mathematical ideas precisely.
- g. Understand how mathematical ideas interconnect and build on one another to produce a coherent whole.
- h. Recognize and apply mathematics in context outside of mathematics.
- i. Create and use representations to organize and record and communicate mathematical ideas.
- j. Select, apply and translate among mathematical representations to solve problems.
- k. Utilize representations to model and interpret physical, social and mathematical phenomena.

## **National/State Standards**

### **STANDARDS**

Objectives and Standards meeting the criteria of the American Mathematical Association of Two-Year Colleges

#### Standard I-1: **Problem Solving**

Students will engage in substantial mathematical problem solving.

#### Standard I-2: **Modeling**

Students will learn mathematics through modeling real-world situations.

#### Standard I-3: **Reasoning**

Students will expand their mathematical reasoning skills as they develop convincing mathematical arguments.

#### Standard I-4: **Connecting With Other Disciplines**

Students will develop the view that mathematics is a growing discipline, and interrelated with human culture.

#### Standard I-5: **Communicating**

Students will acquire the ability to read, write, listen to, and speak mathematics.

#### Standard I-6: **Using Technology**

Students will use appropriate technology to enhance their mathematical thinking and understanding and to solve mathematical problems and judge the reasonableness of their results.

#### Standard I-7: **Developing Mathematical Power**

Students will engage in experiences that encourage independent exploration in mathematics, develop and reinforce tenacity and confidence in their abilities to use mathematics.

Standard C-1: **Number Sense**

Students will perform arithmetic operation, as well as reason and draw conclusions from numerical information.

Standard C-2: **Symbolism and Algebra**

Students will translate problems situations into their symbolic representations and use those representations to solve problems.

Standard C-3: **Geometry**

Student will develop a spatial and measurement sense.

Standard C-4: **Function**

Students will demonstrate understanding of the concept of function by several means including verbal, numerical, graphical, and symbolic and incorporate the understanding as a central theme into their use of mathematics.

Standard C-5: **Discrete Mathematics**

Students will use discrete mathematical algorithms in order to solve problems of finite character.

Standard C-6: **Probability and Statistics**

Students will analyze data and use models to make inferences about real-world situations.

Standard C-7: **Deductive Proof**

Students will be exposed of the deductive nature of mathematics as an identifying characteristic of the discipline, recognize the roles of definitions, axioms, and theorems, and identify and construct valid deductive arguments.

Standard P-1: **Teaching with Technology**

Mathematics faculty will model the use of appropriate technology in mathematics, so that students can benefit from the opportunities it presents as a medium of instruction.

Standard P-2: **Interactive and Collaborative Learning**

Mathematics faculty will foster interactive learning through student writing, reading, speaking, and collaborative activities so that students can learn to work effectively in groups and communicate about mathematics both orally and in writing.

Standard P-3: **Connecting with Other Experiences**

Students will be actively involved in meaningful mathematical problems that build upon their experiences, focus on broad mathematical themes, and build connections within branches of mathematics and between mathematics and other disciplines so that student will view mathematics as a connected whole relevant to their lives.

Standard P-4: **Multiple Approaches**

The curriculum will model the use of multiple approaches- numerical, graphical, symbolic, and verbal - to help students learn a variety of techniques for solving problems

**Teaching Methods**

The course incorporates discussion, problem solving, student questions, lecture, and group work. Students should come to class with a prepared list of questions.

**Methods of Evaluation**

Evaluation **will** be done by a series of examinations and a comprehensive final examination. Evaluation **may** be done using in class quizzes, take home quizzes, research papers or essays, mathematics notebook evaluation, attendance, and class participation.

Letter grades will be assigned to final scores as follows:

|   |                                |
|---|--------------------------------|
| A | 90 - 100%                      |
| B | $80 \leq \text{grade} < 90 \%$ |
| C | $70 \leq \text{grade} < 80 \%$ |
| D | $60 \leq \text{grade} < 70$    |
| F | grade < 60%                    |

## **Grading Policy**

The following letter grades are used at Richland to represent the student's level of performance in courses numbered 080 or above in this catalog:

### Grading System

| Letter Grade | Meaning   |
|--------------|---|
| A            | Superior or excellent   |
| B            | Very good or above average  |
| C            | Good or average   |
| D            | Barely passing or below average   |
| F            | Failure or unsatisfactory   |
| AU           | Audit (For more information, see "Auditing a Course" in the college catalog.)   |
| CR           | Completed course requirements.  |
| I            | Incomplete. All coursework must be finished by the end of each term, unless the instructor agrees in writing to a specified grace period no longer than 60 days after the end of the term. Failure to complete coursework within the 60-day grace period will result in the grade the student would earn without having all the course work complete. Grade of "W" or "AU" is not allowed on an incomplete. |
| W            | Withdrew from the College or dropped the course before the beginning of the final examination period.   |
| X            | Did not complete course requirements.   |

GRADING AND EXAMINATION POLICIES  
MATHEMATICS COURSE 098

*Professor Odell's Policies for pencil and paper examinations and quizzes*

\*\*\*\*\*

**TEST POLICIES**

Please use a pencil and eraser for taking all examinations. **YOU ARE EXPECTED TO SHOW ALL YOUR WORK AND CIRCLE YOUR ANSWERS.** Calculators are allowed for examinations unless otherwise announced. **THE STUDENT IS RESPONSIBLE FOR ALL ANNOUNCEMENTS REGARDING THE EXAMINATION. ABSOLUTELY NO CELL PHONES MAY BE OUT OR USED DURING ANY EXAMINATION!!!**

- No talking during the examination.
- All work must be shown where appropriate and answers circled where appropriate.
- All x minimum and maximum and y minimum and maximum on graphs are to be shown.
- Any essays are to be answered using complete sentences with correct spelling.
- The student is not to leave the room unless given approval by the instructor.
- All cell phones are to be left turned off.
- If the student expects an emergency during the examination, the instructor is to be notified.
- If the student is found “cheating” during the examination, the student will receive a zero for the examination and the instructor reserves the right to inform the appropriate administrators of this violation. The instructor reserves the right to fail the student for the course if the student is found “cheating.”
- If the student leave’s the room and returns and continues the examination without the instructor’s permission, this will be perceived as cheating and the appropriate actions will be taken.
- All questions are to be answered thoroughly and graphs shown when asked to sketch graphs.
- The student is responsible to insure their name appears on the examination.
- The student is to NEVER take an examination from the classroom during the administration of the examination.



## FINAL EXAM

All students **MUST** take the final exam(s). **If a student does not take the exam, the grade for the course will be "F"**. The final examination will be comprehensive.

## MISSING AN EXAMINATION

**There is no make up on missing exams.**

## QUIZZES – Instructor may or may not use these for in class evaluations

Quizzes may or may not be announced ahead of time.  
There will be **NO MAKE UP ON QUIZZES!**

### UNANNOUNCED QUIZZES

Unannounced quizzes may be given at any class meeting and at any time during the class meeting. Quizzes may be "open mind". A quiz may also be OPEN NOTEBOOK over problems discussed in prior class meetings. If the student is diligent in homework and has a good working set of homework problems, the student should do very well on quizzes. These quizzes may be given at the first of the hour, although they may be given at any time, as the instructor deems necessary.

### TAKE HOME QUIZZES

There may be opportunities for some take home quizzes, many of which will be problems strictly from the textbook. **TAKE HOME QUIZZES WILL NOT BE ACCEPTED LATE!!** All take home quizzes or tests must have the following:

1. Student's Name
2. Course number
3. Course Section Number
4. Problem Section Number
5. Problem Number
6. Problems on only one side of the paper.
7. Answers circled where appropriate and highlighted with yellow highlighter.
8. Work is to be neat, not crowded and all work is to be shown where appropriate in a logical manner and to be done in one column down the paper.
9. All work, which involves more than one piece of paper, is to be stapled in the upper left hand corner. **IF IT IS NOT STAPLED, IT WILL GET A ZERO.**
10. Do NOT use paper torn from a spiral notebook!

Take home quizzes problems will be graded as wrong for any one of the following:

1. The answer is not circled
2. The answer is not yellow highlighted. (Not graphs and sentences)
3. The answer does not include appropriate units or incorrect units.
4. The answer only is given, where symbolic manipulation will be necessary to arrive at the answer, and work is to be shown where appropriate.
5. Graphs are not properly labeled.
6. The problem has an incorrect answer.
7. Complete sentences are not used where appropriate.
8. Words are misspelled.

### **Attendance Policy**

#### **Class Attendance Policy of Richland**

Regular attendance is necessary for satisfactory college work. Richland faculty will take roll daily, at least through the midterm of the semester.

If a student is absent for one week plus one day (or less, if specified by the instructor in the course outline), his/her name may be sent to the Student Records Office. Students with unsatisfactory attendance may be sent a "stopped attending" letter. At midterm, the College will administratively drop students who have failed to meet the attendance standard as certified by the instructor. This procedure is in accordance with Illinois Community College Board policy.

The College reserves the right to remove any student from the College who is interfering with or disrupting the normal activities of the institution or the rights of others. Students removed from the College must apply for readmission through the Vice President of Student and Academic Services.

#### **ATTENDANCE/TARDINESS POLICY OF THE INSTRUCTOR:**

Regular attendance is essential in satisfactory completion of this course. If students have excessive absences, they cannot develop to their fullest potential in the course. Students who, because of excessive absences, cannot complete the course successfully will be administratively dropped from the class at midterm.

As the study of mathematics involves collaborative learning and student interaction and discussion regular attendance is essential in satisfactory completion of this course. If students have excessive absences, they cannot develop to their fullest potential in the course.

The instructor expects the student to regularly attend class and to be on time. Failure to be in class when class begins will be considered tardy. *Roll may be taken at*

*any time during the class period and may occur more than once. If a student is tardy and not present when roll is taken, the student will be considered absent.*

**The instructor reserves the right to lower a student's grade due to excessive absences. For each absence over the number of credit hours of the course will result in the lowering of the grade a letter grade, and this process is cumulative. For example, a four-hour course in which the student has 5 absences may result in the letter grade lowered one grade. Six absences may result in the grade lowered two letter grades. 7 absences may result in the grade lowered three letter grades, and eight absences may result in the grade lowered four letter grades. The instructor does not distinguish between what some refer to as excused absences and unexcused absences. An absence is an absence. Any absence or tardiness should be briefly discussed with the teacher. Being tardy and absent on a regular basis are not conducive to learning.**

**Consistent tardiness will not be tolerated and will result in the student being withdrawn from the class!**

**THE STUDENT IS RESPONSIBLE FOR ALL ANNOUNCEMENTS, CHANGES IN ASSIGNMENTS, OR OTHER VERBAL INFORMATION GIVEN IN THE CLASS WHETHER THE STUDENT IS IN ATTENDANCE OR NOT!**

The instructor will announce the class makeup policy for missed exams and related work. The maximum learning situation for everyone results from regular attendance, class participation, and attentiveness and attitude in class.

If at any time the instructor believes that a student is at risk of being unsuccessful in the course, the instructor may notify the Student Success office. This office will in turn contact the student suggesting assistance options.

### **Study Time Required**

Two hours or more of outside study for each class hour of lecture/discussion is usually needed for satisfactory performance, although this amount may vary from student to student. If a student is weak, it may take 3 or more hours outside of class for every hour inside of class to have success. Time management is crucial to success in the course.

**Students who plan to work at outside jobs while attending Richland should take study time into consideration when planning their schedules.**

**\*\*The following is the general opinion of the mathematics faculty. If a student is of average background or training and of average ability then studying effectively for 2 hours for every hour in class will generally result in a C. It will possibly take 3 hours of efficient and effective studying for every hour in class for this average student to receive a B and 4 hour or more of quality studying for every hour in class to receive an A. If a student is well above average ability and preparation these hours may be reduced. It is the opinion of the Richland Mathematic Department that one hour or less of efficient study outside of class will earn the student a grade of F (failure)!**

## **STUDY GROUPS**

The student is encouraged to study with other students. A study group of 2 to 4 persons is an excellent opportunity to ASSIST in the learning of mathematics. Each student in the study group should be responsible for the understanding of ALL of the material.

## **HOMEWORK**

The student of mathematics will be given the opportunity to do numerous homework exercises. As time permits, these will be discussed in class, although it will be impossible to work every homework problem in class. It is the belief of this instructor that college students have to take responsibility for their own studies and mathematics courses taught at the college level need a good deal of study.

## **DO NOT GET BEHIND IN HOMEWORK!!!**

A student should plan on working problems assigned in each section even if they miss the class.

## **HOMEWORK NOTEBOOK**

The instructor may provide a more detailed outline of notebook requirements.

The student's homework notebook needs to be orderly and include the following:

1. Student's overall point total - filled out **AT THE VERY BEGINNING** of notebook. This should be the first page of the notebook.
2. All homework answers are to be circled where appropriate.
3. All work is to be shown. Do not show just answers as this is not acceptable
4. Work is to be neat, not crowded and in a logical manner.

5. Do NOT use paper torn from a spiral notebook
6. All homework-all sections numbered, all answers (except graphs) circled
8. A graph indicating the overall grade should be kept on a weekly basis. It should be in the notebook as the second page following the overall point total grade page.
9. Class notes with appropriate information from the text needs to be an integral part of the notebook.
10. Section dividers - Divide and label sections in order for the student and instructor to quickly determine the location of any section.
11. Copies of all exams - of those which student gets to keep (some will be kept by the instructor)
12. Corrections to examinations
13. Course Syllabus
14. Copies of all handouts
15. Assignment sheet
16. **USE A 3 RING NOTEBOOK required**- (Get a BIG one OR TWO MEDIUM SIZE NOTEBOOKS.)
17. Practice tests and answers
18. Chapter study sheets
19. Problems and/or exercises done in class are circled in homework for studying for examinations.

**\*\*\*\* *ALWAYS HAVE HOMEWORK WITH YOU FOR CLASS*\*\*\*\***

The instructor will provide an assignment of the sections to be presented during class. The student should read this material prior to class.

Each student is to grade his or her own homework. See Homework Requirements for specifics. .

## SUPPLIES NEEDED

1. **Graphing calculator - Required and Essential**
2. Stapler
3. Red pen
4. Ruler
5. 3-ring notebook **Required** (extra large)
6. Pencils
7. Graph paper
8. Calculator reference book (or instruction manual)
9. Loose leaf lined paper
10. Yellow Highlighter
11. Notebook dividers

### Optional Supplies

13. Plastic zippered notebook (to store items)
14. Protractor
15. Compass
16. Paper punch

## CLASSROOM

1. No student is to bring candy, food or beverage item into a classroom other than water.
2. **All students are to show courtesy to their fellow students and respect their right to have the opportunity to learn.**
3. Classroom presentations may be taped. These tapes would be for that student's use only.
4. **Cell phones and pagers are to be left off** unless one is expecting a definite emergency call and if so, the instructor should be made aware of a potential emergency.
5. **There is to be no cell phone “texting” in class. If a student is found to be “texting during class, they will be asked to leave.**
6. **No hats are to be worn in the classroom.**
7. If one has to leave the room, it should be for an emergency situation, and done with courtesy to the instructor and students. Slamming of doors, uses of swear words are not acceptable.
  
8. **Students that throw items, yell, are disruptive to typical classroom behavior, swear at students or the instructor, or throw temper tantrums will be asked to leave and will be dropped from the class!!!!**

## **9. INNAPPROPRIATE BEHAVIOR IS NOT TOLERATED!!!!**

10. No student is to continually leave and return to the classroom.

11. No student is welcome that has clothing where obscene language is visible.

### **Student Learning Center**

The Student Learning Center (SLC), Room S117, offers free tutoring to students who may need help with classes or programs. Both peer and faculty tutors are available on an appointment or drop-in basis for many areas including math, biology, chemistry, reading comprehension, study skills, vocabulary building, research, and specific written assignments. Biology and chemistry tutoring is available in Room E112 with hours varying each semester. In cooperation with other academic programs, the SLC may offer study groups each semester.

Schedules with location and time are posted in the Center. Computers with tutorial software and word processing programs are available for student use any time the SLC is open.

### **ADDITIONAL HELP:**

. The student is encouraged to get additional help when the material is not comprehended. Mathematics is a cumulative subject; therefore, getting behind is a difficult situation for the student.

The entire course has been videotaped by the author and is available in the Learning Resources Center. Using the problem list that shows the correspondence between the lesson numbers on the video lessons and the section numbers in the text is very useful.

### **Assessment Services**

Assessment Services, located in Room W124, Ext. 238, provides testing services for placement in English, mathematics, and health courses. Also administered are the Constitution test, exams from other universities, and make-up tests for Richland classes. Photo identification is required for all students completing any test in Assessment Services. Students completing tests for other universities or for CLEP or DANTES testing may need to pay an additional fee. Assessment Services is also a designate VUE Testing site, allowing students to complete testing for national certification in certain technical areas.

### **Early Alert**

In response to a student survey that showed that students want to know how they are doing in classes during a semester instead of at the end of a semester, the College has developed an Early Alert program. Any time an instructor believes a student is at risk of being unsuccessful in a course, the instructor can notify the Student Success Coordinator. The Coordinator will in turn contact the student and suggest assistance options that are available on campus (usually at no cost to the student). Students are welcome at any time to contact the Student Success Coordinator at Ext. 309 or stop by the office in the Student Services Center.

### **Security Services**

Richland has around-the-clock security officers. Evening escort service is available. Richland's security works with local law enforcement officers with campus interventions.

### **Learning Accommodation Services**

Richland Community College offers support and accommodations to students with documented disabilities by providing advisement, counseling, adaptive equipment and materials, instructional aids, tutors, note-takers, interpreters, and testing accommodations, as well as many individualized services. All campus facilities are accessible. The campus is self-contained except for the Horticulture/Agriculture Building. For more information, students should contact the Learning Accommodation Services (LAS) Office, Room C137.

Documentation of disability is required for all services. Visit LAS online at [www.richland.edu/sas/retention/das/](http://www.richland.edu/sas/retention/das/).

### **Student Support Services/TRIO ( assuming funding is available)**

Student Support Services/TRIO, a federally funded program, provides educational support to low-income, first generation students (neither parent with a bachelor's degree) and to students with physical or learning disabilities who are admitted to the program. Participants must also be accepted as Richland students and have citizenship, permanent residency, or refugee status. The purpose of the program is to help students improve academic performance, graduate from Richland, and transfer to a four-year institution of their choice.

Services include advising, tutoring, mentoring in addition to academic improvement services, cultural trips, college trips, leadership activities, and technology loans. Applications are available in the TRIO Office.

[www.richland.edu/sas/retention/trio/](http://www.richland.edu/sas/retention/trio/).



## **Proficiency Exam**

The fee for a proficiency exam is one-half of the tuition normally charged for a course. See the Dean for information about the process of proficiency.

## **Full-Time Academic Load**

An academic load of 12-17 semester hours is considered normal for a full-time student during regular semesters. During the summer session, 6-8 semester hours is considered a full load.

Part-time students are those students enrolled for less than the normal full load. Students with jobs or other outside commitments should limit their credit loads accordingly.

Students planning an overload of courses (more than 17 semester hours) must have at least a "B" average for 12 or more hours during the previous semester. An advisor or counselor in Retention Services before registration must approve all such overloads.

## **Appealing a Grade**

A student who feels he/she has received an unfair or inaccurate grade may appeal through the Judicial Board.

Grade appeals must be filed no later than one year from the last day of the semester for which the grade was received. A student wishing to appeal should follow the procedures set forth in the Student Resolution Process Chart on page 44 under Student Grievance and Disciplinary Proceedings.

## **Dropping a Course**

Dropping a course at Richland can occur under two circumstances: Student-Initiated or Administrative.

### **1. Student-Initiated**

A student may drop a course through the last day before final exam week of any term. A grade of "W" will be recorded for the course dropped. **Students are encouraged to consult with their instructor before dropping a course.**

A "Change of Schedule" form may be obtained in the Student Services Center or any academic division office and must be signed by the class instructor.

Students dropping two or more courses for two consecutive terms are advised to see a counselor in Retention Services to establish a reasonable academic load for the next term of attendance.

## 2. Administrative

A student may be administratively dropped due to nonpayment of tuition and fees or for poor attendance as follows:

1. Any time a student's attendance violates the standard set by the course instructor (as stated in the course syllabus). At midterm, the College will administratively drop students who have failed to meet the attendance standard for the course.
2. Failure to attend the first two classes of a course.
3. Students having unsatisfactory attendance during the period from midterm through the last regular week of class before finals may be administratively dropped.

**When a student stops attending a course, he/she should not assume the College has issued an Administrative Drop. If the Administrative Drop is not issued, the student may receive an "F" for the course. Students who stop attending a class should complete the "Change of Schedule" form and have it signed by their instructor. This form must be turned in to Student Records before the deadline to complete the withdrawal process.**

**Students who miss a class are responsible for work assigned during their absence. Instructors may, at their option, accept late work, but such work may receive a lower grade.**

Students may also be required to withdraw from a course or the College if they cannot make satisfactory academic progress despite special assistance, advising, and counseling.

### **Withdrawing from a Course or the College**

Students withdrawing from the College are required to settle all obligations, including money owed to the College, and must see a counselor or advisor as part of the withdrawal process. Students may withdraw in person or by telephone.

Students may withdraw at any time, up to the last day of class before the final examination period of any term. A grade of "W" will be given for all current courses, if the courses are officially dropped.

**"Change of Schedule" forms are available in the Student Services Center, Room C129. To withdraw by phone, call 875-7211, Ext. 267.**

## Auditing a Course

Any credit class offered by Richland may be taken on an audit basis unless otherwise specified.

Students wishing to audit a class will be assessed the credit hour rate and other applicable fees and must complete an audit form in the Student Records Office by the 10th day of the semester. Change to the grading status cannot be made after the 10th day, and a grade of AU will be assigned at the completion of the course. No credit will be awarded for auditing a course.

## Statement of Student Responsibilities

Listed below are the responsibilities that Richland students accept through membership in the College's learning community. Each student should approach academic endeavors, relationships, and personal responsibilities with a strong commitment to personal integrity and mutual respect. As members of the Richland teaching and learning community, students have a responsibility to:

- Read the College Catalog and Student Handbook
- Become knowledgeable about College policies and procedures.
- Abide by College policies and procedures.
- Be aware of academic and graduation requirements.
- Provide accurate information on College forms.
- Meet financial obligations to the College.
- **Attend classes and be on time.**
- **Complete assignments and exams based upon course syllabus information.**
- **Participate in class.**
- Fulfill their academic responsibilities in an honest and forthright manner.
- Utilize appropriate support services when needed.
- Seek help from faculty when needed.
- Seek out answers to questions.
- Abide by the equipment usage policy.
- Meet published deadlines.
- Notify College officials if a condition exists which is in violation of student's rights, College policies, rules, standards, and procedures.
- Join/seek out groups and individuals that will help students achieve their goals.
- Abide by state and federal laws.
- Conduct themselves in a responsible manner in and out of the classroom.
- Protect, support, and contribute to a safe environment within the learning community.
- Show regard for the property of the College, its community members and visitors. Assist the College in fulfilling its administrative responsibilities.

## **Student Conduct**

Students enrolled at Richland Community College are considered by the College to have reached the age of responsible citizenship and are expected to conduct themselves in a responsible manner while on campus.

By the act of registration for classes at the College, students obligate themselves to adhere to the rules and regulations, which the institution formulates and publishes in the College Catalog, Student Handbook, and other, published materials. Accordingly, students are expected to assume primary responsibility for their own conduct.

Disciplinary action may be imposed upon a student by an instructor or an administrator of the College for gross misconduct that would tend to interfere with educational process, disrupt the normal activities of the institution, or infringe upon the rights of others while the student is on the College premises (owned, leased, or rented) or at functions under the sponsorship of the College. In addition, the College reserves the right to remove any individual from the campus who is physically or verbally disrupting a class or disturbing the peace.

Students charged with misconduct or with violation of the law and/or College rules and policies may be subject to written reprimand, restitution, temporary expulsion, disciplinary probation, suspension, or expulsion. Individuals who are not students and who violate these regulations will be considered trespassers and will be treated accordingly.

## **Academic Dishonesty Policy**

The student is expected to be honest in his/her class work or in the submission of information to the College. The College regards dishonesty in classroom and laboratories and on assignments and examinations and the submission of false and misleading information to the College to be a serious offense.

Those students who cheats, plagiarizes, or furnishes false, misleading information to the College is subject to disciplinary actions up to and including failure of a class or suspension/expulsion from the College

## **Removal from a Class or the College**

**The College reserves the right to remove any individual from a class or the College for the following reasons?**

- 1. For physically or verbally disrupting a class or disturbing the peace.**
2. For unsatisfactory academic progress.
3. For gross misconduct or any other actions or unlawful conduct which would tend to interfere with the educational process, disrupt the normal activities of the institution, or infringe upon the rights of others while the individual is on the College premises (owned, leased, or rented) or at functions under the sponsorship of the College.

## **Richland Community College Human Resources Statement**

\*\* It is the policy of Richland Community College that discrimination against any individual or group of individuals on the basis of race, color, religion, sex, marital or parental status, national origin or ancestry, age, mental or physical disability (except where it is a bonafide occupational qualification), sexual orientation, military status, or status as a disabled or Vietnam-war veteran, is specifically prohibited.

This Intermediate Algebra textbook is designed as a chronological course to guide you through High School Algebra (sometimes called Algebra II in some locations). This textbook assumes you have completed Arithmetic and Algebra. Although not required, Intermediate Algebra is normally taken the year after Geometry. Text. Beginning and Intermediate Algebra , by Tyler Wallace is licensed under a Creative Commons Attribution 3.0 Unported License. The course was originally created for the Open Course Library project, funded by the Bill and Melinda Gates Foundation and managed by the Washington State Board of Community and Technical Colleges. The text for this course is laid out in 11 modules: Module 0: Integers, Fractions, Order of Operations, Properties of Algebra. Module 1: Solving linear equations including Beginning and Intermediate Algebra. Item Preview. remove-circle. Share or Embed This Item. EMBED. Introductory Algebra book with exercises. Covers entire high school core algebra topics. Identifier. BeginningAndIntermediateAlgebra. Identifier-ark. ark:/13960/t1mg8s546. Ocr. ABBYY FineReader 8.0.