INSTRUCTOR: Carolynn Campbell Reed　　**WEBSITE:** http://www.austincc.edu/creed

EMAIL: creed@austincc.edu　　　　　　**MAILING ADDRESS:**

PHONE/OFFICE: 223-5825 / EVC 9406　　　Carolynn Reed

OFFICE HOURS: Wed: 9am–10am　　　　　**Austin Community College – Eastview**
　　　　　　　　Or by appointment　　　　**3401 Webberville Road, Austin, TX 78702**

MATD 0370 ELEMENTARY ALGEBRA. A course designed to develop the skills and understanding contained in the first year of secondary school algebra. Topics include review of operations on real numbers, graphing linear equations, solving linear and quadratic equations, solving systems of linear equations, polynomials, factoring, and applications.

Course Prerequisite: C or better in MATD 0330 or MATD 0332, C or better in NCBM 0270, TSI score of 336+, or any TSI score below 336 with an ABE score of 5 or 6.

TEXT: *Elementary Algebra, Concepts and Applications,* 10th Ed. by Bittinger & Ellenbogen, Pearson

MyMathLab is required for this course – Refer to the handout: *Information about MyMathLab*

First Day Access
To enhance your learning experience and provide affordable access to the right course material, this course is part of an inclusive access model called First Day™. You can easily access the required materials for this course through Blackboard, at a discounted price, and benefit from single sign-on access.

Austin Community College includes the discounted price as a course fee in your registration fees for this course.

It is NOT recommended that you Opt Out, as these materials are required to complete the course. You can choose to Opt Out on the first day of class, but you will be responsible for purchasing your course materials at the full retail price and access to your materials may be suspended. See your course in Blackboard for details.

CALCULATOR: Students need a scientific calculator. Graphing calculators are not allowed.

COURSE RATIONALE
Elementary Algebra is designed to provide you with the mathematical foundation and personal confidence to enable you to use mathematics in your future life. MATD 0370 is designed to prepare you for the NCBM 0214/MATH 1314 corequisite or the NCBM 0224/MATH 1324 corequisite.

If you need MATH 1332 (College Math), take either NCBM 0185/MATH 1332 or
MATD 0385/MATH 1332 corequisite options**.**

If you need MATH 1342 (Elementary Statistics), take either NCBM 0142/MATH 1342 or MATD 0342/MATH 1342 corequisite options.

Successful completion of NCBM 0185, NCBM 0142, MATD 0385, MATD 0342, or MATD 0485 will make students TSI complete without retesting.

INSTRUCTIONAL METHODOLOGY
This course is taught online as a distance learning course.

Communication

I will use your ACC email address to communicate with you. In a traditional class, you can ask questions and get an immediate answer. A distance learning class is different. You will have to take the initiative and ask questions if you do not understand the material. Send an email if you have questions - the response is usually not instantaneous, but I will answer as quickly as I can. Move on to other material if you can as you wait for my response. I will usually respond to emails within 24-48 hours.

GRADING SCHEME

Online Homework – 6%

Written Homework – 6%

Quizzes – 8%

Four Exams – 16% each (total of 64%)

Comprehensive Final Exam – 16%

GRADING SCALE

A: 90 or more;   B: 80-89;   C: 70-79;   D: 60-69;   F: 59 or less

HOMEWORK

You have Online Homework in MyMathLab and Written Homework worksheets. Both are required and contribute to your homework grade.   The deadline for each homework assignment is on the **Weekly Schedule** handout.

ONLINE HOMEWORK

MyMathLab is interactive and offers help and tutorials in the homework. You must complete each assignment with a 70% or better in order to move to the next assignment, and you can try each problem as many times as necessary. Online homework can be completed late at no penalty.

WRITTEN HOMEWORK

Written homework worksheets are graded by completion and correctness. Guidelines, details and deadlines are on the Weekly Schedule handout. The worksheets are located on my website. Homework can be submitted electronically in Blackboard, in person, by campus mail or in my mailbox (time/date stamped), or by U.S. mail. **Homework is not accepted by email or fax.** Blackboard is the preferred method where feedback is the quickest. **Written homework is accepted up to two weeks late with a 10% penalty.**

QUIZZES

Quizzes are online in MyMathLab. You must make at least a 70% on the online HW to take the quiz. You can take each quiz up to three times and only your highest score is used. You must take each quiz at least once to move on. .

The deadline for each quiz is on the Weekly Schedule handout. Any quiz taken 2 or more days before the due date will receive a 10% bonus. Any quiz taken after the due date will have 10% deducted from the score.

EXAMS

There will be four exams plus a comprehensive departmental final exam. All exams are paper and pencil and will be given in the Testing Center. The exam deadlines are on the Weekly Schedule handout. You need an ACC ID to take an exam in the Testing Center. Please read the handout on Testing Center guidelines. **There are no retests, late or make-up exams.**

MISSED EXAM

Your lowest exam grade will be replaced with your grade on the Final Exam (if it's higher). This includes a 0 from a missed exam. You can only replace one exam grade and you cannot replace your grade on the final exam. **If you miss the final exam, you will receive a 0 on the exam.**

Ways to Get Help

- At the [ACC Learning Labs](#) you can get free help with math tutors in person. All Learning Labs have internet access, so you can access your course materials when working with a tutor.

- We have a tutor embedded in this course – a personalized tutor! You will see her contact information in Blackboard. This is a new program at ACC and we're excited to be a part of it.

- ACC Learning Labs offer free Online Tutoring! Information is [here.](#) You can use these tutors as often as you'd like.

- Brainfuse is online tutoring accessible through Blackboard. You only get 5 free hours of tutoring though. Information is [here.](#)

HOW TO PROGRESS THROUGH THE COURSE

1) Videos and eText In MyMathLab: Start with online video lectures and example problems. View the lectures and pause as needed to work through examples before working any homework problems. Read through the pages in the textbook for a more thorough explanation. The eText includes animations and You Try It problems.

2) Online Homework: Next work the online homework for that section. Problems often have instructional aides and give immediate feedback. You must complete each assignment with a 70% or better before continuing to the next section. You may attempt each problem as many times as necessary. If you are stuck, get help from me or from the Learning Lab. See the Weekly Schedule for deadlines.

3) Online Quizzes: Take the online quiz shortly after completing the homework for all of the sections covered in the quiz. You must complete all of the online homework in the corresponding sections with a score of 70% or better before attempting the quiz. See the Weekly Schedule for deadlines.

4) Written Homework: Start on the written homework after completing the online work for the week. You must show your work and work each problem correctly to receive full credit. Homework can be submitted electronically in Blackboard, in person, by campus mail (time/date stamped) or by U.S. mail. Blackboard is preferred and quickest. See the Weekly Schedule for details, due dates and guidelines.

5) Exam Reviews: A review sheet (including answers) for each exam is available on my website and in Blackboard. You may turn in Exam Reviews for up to 5 points extra credit applied to the corresponding exam. Reviews are graded on completion. You must show your work for credit since answers are given. Reviews are due on the exam deadline and should be submitted in the same manner as Written Homework. **Scanned reviews are only accepted as ONE pdf document.**

6) Exams: No notes or books are allowed for the exams. Four-function calculators are allowed for Exam 1. Scientific calculators are allowed for the remaining exams. Take the exam in the ACC Testing Center you indicated in your orientation by the deadline in the Weekly Schedule.

TESTING CENTER POLICY

The ACC Testing Centers follow standard procedures, so students know what to expect when they arrive to take their tests. Students should familiarize themselves with the **student guidelines**.

To request an exam, you must have:

- **ACC Photo ID**
- Course Abbreviation (MATD), Course number (0370), synonym (88061), section (004)
- Instructor's Name (Carolynn Reed)

Personal belongings such as backpacks, books, and electronic devices (including, but not limited to, cell phones and smart watches) are not allowed in the Testing Center. Possession of prohibited items or accessing unapproved resources in the testing room will result in the immediate termination of the exam and **possible disciplinary action**.

ACC Testing Center policies can be found at: http://www.austincc.edu/support-and-services/services-for-students/testing-services/instructional-testing/testing-center-guidelines

LEARNING LABS

ACC main campuses have Learning Labs that offer free first-come first-serve tutoring. The hours, contact information and locations are located at http://www.austincc.edu/support-and-services/tutoring-and-academic-help/learning-lab-services.

COMPUTER LAB

ACC main campuses have Computer Labs available for students with an ACC ID. For hours, locations, and contact information: http://irt.austincc.edu/ict/computer/studentdescript.php

ATTENDANCE/WITHDRAWALS – last day to withdraw is Thursday, November 21

Since this is a distance learning course, there is no class meeting time. So attendance is monitored by student progress.

- **If you are more than 1 week behind in the class, you may be withdrawn from the course.**
- **If you miss more than one exam, you may be withdrawn from the course.**

It is the student's responsibility to initiate all withdrawals in this course. I may withdraw students for lack of progress, but make no commitment to do this for the student. After the withdrawal deadline, neither the student nor the instructor may initiate a withdrawal.

Students who enroll for the third or subsequent time in a course taken since Fall 2002, may be charged a higher tuition rate, for that course.

State law permits students to withdraw from no more than six courses during their entire undergraduate career at Texas public colleges or universities. With certain exceptions, all course withdrawals automatically count towards this limit. Details regarding this policy can be found in the ACC college catalog.

REINSTATEMENT

Students who withdrew or were withdrawn will not be reinstated unless they have completed all course work, projects, and tests necessary to place them at the same level of course completion as the rest of the class. Reinstatement is up to the instructor's approval.

IN PROGRESS GRADES (rarely given)

To earn an "IP" grade, the student must be doing all assigned work, but not earning a grade of C or higher in the course. Students who are given an IP grade must register and pay tuition for the same course again to receive credit and should not go on to the next course. A maximum of 2 IP grades can be awarded in any one course.

INCOMPLETES (rarely given)

To receive a grade of "I", a student must have taken all examinations, be passing, and after the last date to withdraw, have a personal tragedy occur which prevents course completion.

TSI Warning for students who are not TSI complete*

Students who are not TSI complete in math are not allowed to enroll in any course with a math skill requirement. All students are required to be "continually in attendance" in order to remain enrolled in this course. If this is the only developmental class you are enrolled in, and you withdraw yourself from this course or are withdrawn by your instructor, then:

    a) You may be withdrawn from courses that you should not be enrolled in, such as any class with a math skill requirement.

    b) You will continue to face more serious consequences, up to being restricted to only registering for developmental courses, until you complete the required developmental math course or satisfy the TSI requirement in another way. More information can be found at https://sites.google.com/a/austincc.edu/math-students/choose/matd/tsi
* *If you are unsure whether or not this warning applies to you, see an ACC advisor immediately.*

Importance of Completing Developmental Course Requirements

The first steps to achieving any college academic goal are completing developmental course requirements and TSI requirements. The first priority for students who are required to take developmental courses must be the developmental courses. TSI rules state that students are allowed to take college credit courses, if they are fulfilling their developmental requirements. Because successful completion of dev courses is so important, ACC will intervene with any student who is not successfully completing developmental requirements. This intervention can mean a hold on records, requiring developmental lab classes, and monitoring during the semester.

STUDENT SUPPORT SERVICES

The success of our students is paramount, and ACC offers a variety of support services to help, as well as providing numerous opportunities for community engagement and personal growth.

Student Support

ACC strives to provide exemplary support to its students and offers a broad variety of opportunities and services. Information on these campus services and resources is available at *http://www.austincc.edu/students*.

Student Accessibility Services

Students with documented disabilities who need classroom, academic, or other accommodations must request them through the office Student Accessibility Services (SAS). SAS offices are located at each major campus. Students are encouraged to request accommodations when they register for courses or at least three weeks before the start of the semester; otherwise, the provision of accommodations may be delayed. Students who have received approval for accommodations from SAS for this course must provide the instructor with the document titled "Notice of Approved Accommodations" from SAS before accommodations will be provided. Accommodations will not be provided retroactively. Arrangements by the instructor for academic accommodations can only be made after he or she receives the "Notice of Approved Accommodations" from the student.

Additional information about Student Accessibility Services is available at https://www.austincc.edu/offices/student-accessibility-services-and-assistive-technology

Academic Support

ACC offers academic support services on all of its campuses. These services, which include face-to-face and online tutoring, academic coaching, and supplemental instruction, are free to enrolled ACC students. Tutors are available in a variety of subjects ranging from accounting to pharmacology. Students may receive these services on both a drop-in and referral basis. Tutoring schedules can be found at: https://www.austincc.edu/students/tutoring/tutoring-schedules

Library Services

ACC has a full-service library at each of its campuses to support ACC courses and programs and to provide students with research and assignment assistance from expert faculty librarians, computers, course reserves, laptop and tablet check out, study spaces, and copying, printing, and scanning services. In addition, ACC students have full rights and privileges to access Library Services online 24/7 via the ACC Library website and students can use their ACCeID logins to access all online materials, including ebooks, articles from library databases, and streaming videos.   ACC Libraries also provide an "Ask a Librarian" service, which allows students to reach a librarian 24/7 through online chat. Faculty librarians are also available via email, phone, and in person seven days a week during hours of operation. Visit:

- Library Website: http://library.austincc.edu
- Ask a Librarian: https://library.austincc.edu/help/ask.php
- Library Hours of Operation by Location: https://library.austincc.edu/loc/
- Email: library@austincc.edu

In partnership with ACC's Student Support Center, ACC Libraries also maintain a limited collection of textbooks for students to borrow. Priority access to the textbook collection is given to students receiving assistance. More information is available on the ACC website by searching "Student Support Center Textbook Collection."

Student Organizations

ACC has over seventy student organizations, offering a variety of cultural, academic, vocational, and social opportunities. They provide a chance to meet with other students who have the same interests, engage in service-learning, participate in intramural sports, gain valuable field experience related to career goals, and much else. Student Life coordinates many of these activities, and additional information is available at http://sites.austincc.edu/sl/.

Personal Support

Resources to support students are available at every campus. To learn more, ask your professor or visit the campus Support Center. All resources and services are free and confidential. Some examples include, among others:

- Food pantries are located in all campus Student Life offices: https://sites.austincc.edu/sl/programs/foodpantry/.
- Assistance with childcare or utility bills is available at any campus Support Center: http://www.austincc.edu/students/support-center.

- The Student Emergency Fund can help with unexpected expenses that may cause you to withdraw from one or more classes: http://www.austincc.edu/SEF.
- Help with budgeting for college and family life is available through the Student Money Management Office: http://sites.austincc.edu/money/.
- Drop-in child watch is available at Highland Campus: http://www.austincc.edu/students/child-care/child-watch-drop-in-center. A full listing of services for student parents is available at: https://www.austincc.edu/students/child-care

Clinical Counseling services are available throughout the ACC Student Services District to address personal and or mental health concerns: http://www.austincc.edu/students/counseling .

If an emergency occurs during operational hours, please come to the Student Services Office and let the front intake staff know that you are experiencing a crisis. They will alert appropriate personnel. You may also contact the ACC District Police at 222 (on campus) or 223-7999 (off campus or cell phone).

After Hours:
If you are struggling with a mental health or personal crisis, call one of the following numbers to connect with resources for help. However if you are afraid that you might hurt yourself or someone else, call 911 immediately.

Free Crisis Hotline Numbers:
- Austin / Travis County 24 hour Crisis & Suicide hotline: **512-472-HELP (4357)**
- The Williamson County 24 hour Crisis hotline: **1-800-841-1255**
- Bastrop County Family Crisis Center hotline: **1-888-311-7755**
- Hays County 24 Hour Crisis Hotline: **1-877-466-0660**
- National Suicide Prevention Lifeline: **1-800-273-TALK (8255)**
- Crisis Text Line: **Text "home" to 741741**
    - Substance Abuse and Mental Health Services Administration (SAMHSA) National Helpline: **1-800-662-HELP (4357)**
- National Alliance on Mental Illness (NAMI) Helpline:**1-800-950-NAMI (6264)**

Statement on Students with Disabilities: Each ACC campus offers support services for students with documented disabilities. Students with disabilities who need classroom, academic or other accommodations must request them through the Student Accessibility Services (SAS). Students are encouraged to request accommodations when they register for courses or at least 3 weeks before the start of the semester, otherwise the provision of accommodations may be delayed.

Students who have received approval for accommodations from SAS for this course must provide the instructor with the 'Notice of Approved Accommodations' from SAS before accommodations will be provided. Arrangements for academic accommodations can only be made after the instructor receives the 'Notice of Approved Accommodations' from the student. Students with approved accommodations are encouraged to submit the 'Notice of Approved Accommodations' to the instructor at the beginning of the semester because a reasonable amount of time may be needed to prepare and arrange for the accommodations. Additional information can be found here.

Statement on Academic Integrity

Austin Community College values academic integrity in the educational process. Acts of academic dishonesty/misconduct undermine the learning process, present a disadvantage to students who earn credit honestly, and subvert the academic mission of the institution. The potential consequences of fraudulent credentials raise additional concerns for individuals and communities beyond campus who rely on institutions of higher learning to certify students' academic achievements, and expect to benefit from the claimed knowledge and skills of their graduates. Students must follow all instructions given by faculty or designated college representatives when taking examinations, placement assessments, tests, quizzes, and evaluations. Actions constituting scholastic dishonesty include, but are not limited to, plagiarism, cheating, fabrication, collusion, falsifying documents, or the inappropriate use of the college's information technology resources. Further information is available at https://www.austincc.edu/about-acc/academic-integrity-and-disciplinary-process

Statement on Scholastic Dishonesty: A student attending ACC assumes responsibility for conduct compatible with the mission of the college as an educational institution. Students have the responsibility to submit coursework that is the result of their own thought, research, or self-expression. Students must follow all instructions given by faculty or designated college representatives when taking examinations, placement assessments, tests, quizzes, and evaluations. Actions constituting scholastic dishonesty include, but are not limited to, plagiarism, cheating, fabrication, collusion, and falsifying documents. Penalties for scholastic dishonesty will depend upon the nature of the violation and may range from lowering a grade on one assignment to an "F" in the course and/or expulsion from the college. See the Student Standards of Conduct and Disciplinary Process.

Student Discipline Policy: Classroom behavior should support and enhance learning. Behavior that disrupts the learning process will be dealt with appropriately, which may include having the student leave class for the rest of that day. In serious cases, disruptive behavior may lead to a student being withdrawn from the class. See the Disciplinary Process.

Student Rights and Responsibilities: Academic freedom is a foundation and hallmark of higher education. In the context of college-level courses, it specifically refers to the rights of free expression and respect for others with differing opinions. Students at the college have the rights accorded by the U.S. Constitution to freedom of speech, peaceful assembly, petition, and association. This concept is accompanied by an equally demanding concept of responsibility on the part of the student. Just as you are expected to exercise these rights with respect for state and federal law in the larger world, you are expected to exercise these rights as a student with respect for the college's standards of conduct. These rights carry with them the responsibility to accord the same rights to others in the college community and not to interfere with or disrupt the educational process. Students and faculty alike should enable a climate of mutual respect and civility while fostering the freedom to debate and discuss the merits of competing ideas.

Enrollment in the college indicates acceptance of the rules set forth in the student standards of conduct policy, which is administered through the office of the campus dean of student services. Due process, through an investigation and appeal process, is assured to any student involved in disciplinary action.

Use of ACC email
All College e-mail communication to students will be sent solely to the student's ACCmail account, with the expectation that such communications will be read in a timely fashion. ACC will send important information and will notify you of any college related emergencies using this account. Students should only expect to receive email communication from their instructor using this account. Likewise, students should use their ACCmail account when communicating with instructors and staff. Instructions for activating an ACCmail account can be found here.

Student Complaints
A defined process applies to complaints about an instructor or other college employee. You are encouraged to discuss concerns and complaints with college personnel and should expect a timely and appropriate response. When possible, students should first address their concerns through informal conferences with those immediately involved; formal due process is available when informal resolution cannot be achieved.

Student complaints may include (but are not limited to) issues regarding classroom instruction, college services and offices on the basis of actual or perceived race, color, national origin, religion, age, gender, gender identity, sexual orientation, political affiliation, or disability.

Further information about the complaints process, including the form used to submit complaints, is available at: http://www.austincc.edu/students/students-rights-and-responsibilities/student-complaint-procedures

Statement on Privacy
The Family Educational Rights and Privacy Act (FERPA) protects confidentiality of students' educational records. Grades cannot be provided by faculty over the phone, by e-mail, or to a fellow student.

Safety Statement: Health and safety are of paramount importance in classrooms, laboratories, and field activities. Students are expected to learn and comply with ACC environmental, health and safety procedures and agree to follow ACC safety policies. Emergency Procedures posters and Campus Safety Plans are posted in each classroom and should be reviewed at the beginning of each semester. All incidents (injuries/illness/fire/property damage/near miss) should be immediately reported to the course instructor. Additional information about safety procedures and how to sign up to be notified in case of an emergency can be found at http://www.austincc.edu/emergency

Everyone is expected to conduct themselves professionally with respect and courtesy to all. Anyone who thoughtlessly or intentionally jeopardizes the health or safety of another individual may be immediately dismissed from the day's activity and will be referred to the Dean of Student Services for disciplinary action.

In the event of disruption of normal classroom activities due to an emergency situation or an illness outbreak, the format for this course may be modified to enable completion of the course. In that event, students will be provided an addendum to the class syllabus that will supersede the original version.

Campus Carry

The Austin Community College District concealed handgun policy ensures compliance with Section 411.2031 of the Texas Government Code (also known as the Campus Carry Law), while maintaining ACC's commitment to provide a safe environment for its students, faculty, staff, and visitors. Beginning August 1, 2017, individuals who are licensed to carry (LTC) may do so on campus premises except in locations and at activities prohibited by state or federal law, or the college's concealed handgun policy. In addition, **concealed weapons are not allowed on ACC-sponsored field trips** where the school owns or has chartered or leased vehicles for transportation.

It is the responsibility of license holders to conceal their handguns at all times. Persons who see a handgun on campus are asked to contact the ACC Police Department by dialing 222 from a campus phone or 512-223-7999. Please refer to the concealed handgun policy online at http://austincc.edu/campuscarry

Discrimination Prohibited

The College seeks to maintain an educational environment free from any form of discrimination or harassment including but not limited to discrimination or harassment on the basis of race, color, national origin, religion, age, sex, gender, sexual orientation, gender identity, or disability.

Faculty at the College are required to report concerns regarding sexual misconduct (including all forms of sexual harassment and sex and gender-based discrimination) to the Manager of Title IX/Title VI/ADA Compliance. Licensed clinical counselors are available across the District and serve as confidential resources for students.

Additional information about Title VI, Title IX, and ADA compliance can be found in the ACC Compliance Resource Guide available at: https://drive.google.com/file/d/1o55xINAWNvTYgI-fs-JbDyuaMFDNvAjz/view

Learning Outcomes

Upon successful completion of this course, a student will be able to:

1. Perform operations involving integers, fractions, decimals, percents, signed exponents, scientific notation, ratios and proportions.
2. Solve problems involving geometric figures including perimeter, area, similarity, and the Pythagorean Theorem. Analyze, interpret, and solve problems from line graphs, bar graphs, pictographs, and pie charts.
3. Use appropriate forms of linear equations to identify slope, intercepts, and to graph lines. Find linear equations from given points and graphs of lines. Find solutions to systems of two equations by graphing.
4. Solve applied problems by defining variables, writing equation(s), solving equation(s), and writing an answer to the question in context.   Problems requiring quadratic equations are included as well as problems requiring single linear equations and systems of linear equations.
5. Factor and perform operations to combine and/or simplify expressions and solve equations including numerical, some polynomial, and some rational expressions and equations. Simplify some radical expressions.
6. Use mathematical language, symbols, and notation to communicate mathematical concepts, demonstrate reasoning, and solve problems.

Course Objectives:

These can also be found at: https://sites.google.com/a/austincc.edu/math-students/documents/objectives

Overall objectives:
    A.   Students will feel a sense of accomplishment in their increasing ability to use mathematics to solve problems of interest to them or of use in their chosen fields. Students will attain more positive attitudes based on increasing confidence in their abilities to learn mathematics.
    B.   Students will learn to understand material using standard mathematical terminology and notation when presented either verbally or in writing.
    C.   Students will improve their skills in describing what they are doing as they solve problems using standard mathematical terminology and notation.

1. Description and classification of whole numbers, integers, and rational numbers using sets and the operations among them
    a.   identify and use properties of real numbers
    b.   simplify expressions involving real numbers
    c.   evaluate numerical expressions with integral exponents
2. Polynomials
    a.   distinguish between expressions that are polynomials and expressions that are not
    b.   classify polynomials in one variable by degree and number of terms
    c.   simplify polynomials
    d.   add, subtract, multiply (including the distributive law), and divide polynomials (including division by monomials, but excluding long division)
    e.   factor polynomials in one or more variables (including factoring out the greatest common factor, factoring by grouping, factoring trinomials in which the leading coefficient is one, factoring trinomials in which the leading coefficient is not one, and factoring the difference of two squares)
    f.   understand and use the exponent laws involving integer exponents

g. convert numbers into and out of scientific notation and perform multiplication and division with numbers written in scientific notation

3. Solve linear equations in one variable involving integral, decimal, and fractional coefficients and solutions
4. Solve and graph linear inequalities
5. Application problems
   a. write and evaluate linear expressions from verbal descriptions
   b. solve application problems which lead to one of the following types of equations: linear equations in one variable, systems of two linear equations in two variables, quadratic equations, and rational equations with monomial numerators and denominators)
   c. solve literal equations for a specified variable using addition and multiplication principles
   d. use given data to estimate values and to evaluate geometric and other formulas
   e. solve problems involving the Pythagorean theorem, similar triangles, and proportions
6. Linear equations in two variables
   a. identify the relationship between the solution of a linear equation in two variables and its graph on the Cartesian plane
   b. understand and use the concepts of slope and intercept
   c. determine slope when two data points are given
   d. graph a line given either two points on the line or one point on the line and the slope of the line
   e. write an equation of a line given one point on the line and the slope of the line, or two points on the line
   f. identify lines given in standard, point-slope, or slope-intercept forms and sketch their graphs
   g. solve systems of linear equations
7. Quadratic equations
   a. find solutions to quadratic equations using the technique of factoring and using the principle of square roots
   b. recognize a need to use the quadratic formula to solve quadratic equations and solve quadratic equations by using the quadratic formula when some simplification of square roots is needed
8. Description and classification of irrational numbers
   a. simplify radical expressions
   b. use decimal approximations for radical expressions
9. Rational expressions
   a. determine for which value(s) of the variable a rational expression is undefined
   b. simplify rational expressions containing monomials, binomials, and trinomials
   c. multiply and divide rational expressions containing monomials, binomials, and trinomials
   d. add and subtract rational expressions with like denominators and rational expressions with unlike denominators (only monomials and binomials that do not require factoring)
10. Geometry
    a. understand the difference between perimeter and area and be able to use formulas for these appropriately
    b. solve application problems involving angles and polygons