

MA 100: Intermediate Algebra
Alabama School of Math and Science
Classroom/Office: S201
Web site: mathemartiste.com
Office Hours: Mon, Tues, Wed, Fri 10:00 (3rd per); Thurs 1:45 (7th per); Mon 3:45 (9th per/"after school")
ASMS Math Lab (free peer tutoring): Sunday-Thursday 6:30-8:30pm in S305
Khan Academy Coach Code: 7789PW6B

Fall 2018 Syllabus
Instructor: Sarah Brewer
Office Phone: 251.441.2127
Email: sbrewer@asms.net (best way to contact me)

Text: Aufmann & Lockwood, *Intermediate Algebra: An Applied Approach*, 9th edition.

Coverage: 1.1-4.2, 5.1-6.6, 7.1-7.3, 8.1-8.2

Course Description: This course is intended to teach students the fundamentals of algebra. The course introduces algebra topics such as polynomials, factoring, exponents and radicals, linear and quadratic equations, functions, graphs, systems of equations, and applications. The course prepares students for Accelerated Algebra. Prerequisites: none.

Recommended Materials: Successful students are organized. By keeping your class notes, practice problems, assignments, and study materials organized, you will have an easier time asking for and receiving help, and will have an easier time reviewing for tests. I suggest that students keep a 3-ring binder with notebook paper and dividers, regularly updating this notebook with reflections on assignments, performance, and learning. Dividers could be labeled as follows:

1. Handouts – This section includes the syllabus, formula sheets, photocopies of supplementary texts, or any other materials that are distributed in class that do not fall into another category.
2. Lecture Notes – This section includes any notes taken by the student from class lectures, the textbook, and videos, including any handouts with fill-in note slides, clearly labeled with the date and section or topic title, ordered according to date. Note that any lecture notes presented using the Smart Board will be exported in .pdf format and posted to my teaching web site for student convenience.
3. Problem Solving – This section includes problem sets assigned from the textbook and Khan Academy, and any other practice problems worked by the student to support the lecture notes. These should be labeled neatly with your name, date, textbook chapter & section and/or video/topic title as relevant, and problem numbers.
4. Quizzes/Tests/Projects – This section includes any Quizzes, Tests, Projects, Papers, and Reports, clearly labeled and in order by date.
5. Reflection – This section includes study guides with material grouped by chapter/section/topic, written reflections and corrections after each graded assignment is returned, and copies of any Progress Reports received by the student.

Calculators: Calculators will not be allowed at all on most assignments in this class. When calculators are allowed, students will have in-class access to both scientific (TI-36 X Pro) and graphing (TI-nSpire CX CAS) calculators, and will be assigned a number corresponding to the calculators they are to use throughout the term. For any out-of-class assignments requiring calculator use, students are encouraged to utilize wolframalpha.com and desmos.com.

Grade determination: Grades will be assigned based on total points earned out of total points possible. Assignments and grades will be posted on Netclassroom. Khan Academy assignments will be given regularly. It is the student's responsibility to check these daily to make sure they are not missing anything.

Tests/Exams are worth approximately 100 points each, and may include questions from any of the material covered prior to the test date. Note that there are no "drop" tests.

Test dates: See schedule on last page (tests are every 2 weeks at the end of each week; plan accordingly)

Homework assignments will be made daily and it will be the student's responsibility to remember to hand these in for completion checks at the beginning of the next class. Assignments should be labeled neatly with your name, date, textbook chapter & section and/or video title as relevant, and problem numbers. Since many textbook problems assigned will be odd-numbered, students should check their own work for accuracy and ask the instructor or Math Lab proctors to check even-numbered problems. Credit will not be given for answers copied from the back of the book or from another student. Show all of your own work and make notes if there were problems that gave you particular trouble so that you can go back and practice similar ones. Some assignments may be submitted via turnitin.com. Assignments made on Khan Academy should be worked out on paper and kept in the appropriate notebook section. Even when not required, use of this resource is encouraged.

Quizzes will be given almost daily during the first five minutes of class, and will be a combination of theory (rules, definitions, and formulas) and problems similar to and/or directly from homework assignments.

Make-up policy: Any homework, quizzes, or tests missed due to unexcused absences will receive a grade of zero. Homework assigned during a student's absence must be turned in within three days of the student returning to class. If a student misses a quiz or test with an excused absence and a make-up assignment is available, it must be made up within 3 days of a student's return to class. Arrangements to make-up tests must be done BEFORE the test is missed. In case of unexpected illness, this can be done via email. Note: make-up assignments will, in general, be more difficult than the original.

Cell phone policy: Phones should be SILENT or OFF (not on vibrate) and away. I reserve the right to confiscate any phone that I deem a distraction. Use of cell phones during quizzes or tests will be considered academic dishonesty and result in a grade of zero. Cell phones, along with other personal belongings (including smart watches), will be placed at the front of the classroom during tests/exams. Occasionally, we may use smartphone apps in class, but phones should remain away unless otherwise specified.

Attendance and Tardiness Policy: Three tardies count as one unexcused absence. A student with three unexcused absences may be assigned a grade of WF for the course. Students are responsible for acquiring any missed notes and assignments.

Tutoring: All students are encouraged to attend my weekly Office Hours and the evening student-run Math Lab for help with homework and studying. Even if you do not have a specific question about the material, come by and work on your homework free from distractions and with math experts nearby to help. When you come, make sure you have both your notebook and textbook with you, and that you have at least attempted the problems and/or tried to read the relevant section of your textbook. The primary goal of tutoring is to help you figure out the answers for yourself, not to give you the answer, but if you get stuck, please speak up, even if a Math Lab proctor or myself are helping another student.

Intermediate Algebra Tentative Schedule

Week 1 – August 13-17

- 1.1 Real Numbers
- 1.2 Operations on Integers
- 1.3 Operations on Rational Numbers
- 1.4 Variable Expressions
- 1.5 Verbal Expressions

Week 2 – August 20-24

- 2.1 Solving linear equations
- 2.2 Applications of linear equations
- 2.3 Linear inequalities
- 2.4 Absolute value equations and inequalities
- **8/24 TEST 1**

Week 3 – August 27-31

I am out of town this week. You will be expected to learn this material on your own from your textbook/Khan Academy and with help from Math Lab proctors.

- 3.1 Distance and midpoint formulas
- 3.2 Graphs of equations
- 3.3 Linear functions
- 3.4 Slope of a line
- 3.5 Finding equations of lines
- 3.6 Parallel and perpendicular lines

Week 4 – Sept 4-7 (9/3 is Labor Day holiday; 9/7 is 1st grade posting)

- 4.1 Solving linear systems by graphing and substitution
- 4.2 Solving linear systems by elimination
- 5.1 Multiply and divide monomials, scientific notation
- 5.2 Add, subtract, evaluate polynomials
- **9/7 TEST 2**

Week 5 – Sept 10-14

- 5.3 Multiply polynomials
- 5.4 Divide polynomials
- 5.5 Factor out GCF, by grouping
- 5.6 Factor trinomials
- 5.7 Special factoring

Week 6 – Sept 17-19 (9/19 is short day; 9/20-21 is Fall break)

- 5.8 Solve equations by factoring
- **9/19 TEST 3**

Week 7 – Sept 24-28 (9/28 is 2nd grade posting)

- 6.1 Find domain of and simplify rational expressions
- 6.2 Multiply and divide rational expressions
- 6.3 Add and subtract rational expressions

Week 8 – Oct 1-5

- 6.4 Simplify complex fractions
- 6.5 Solve proportions and applications
- 6.6 Solve rational equations
- **10/5 TEST 4**

Week 9 – Oct 8-12

- 7.1-2 Simplify radical expressions
- 7.3 Multiply and divide radical expressions

Week 10 – Oct 15-19 (10/17 is 3rd grade posting)

- 8.1 Solve quadratic equations by factoring and taking square roots
- 8.2 Solve quadratic equations by completing the square and using the quadratic formula
- **10/19 TEST 5**

Week 11 – Oct 22-25

- Review

Final Exams – Oct 26-31