

Algebra 2A/2B

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Office Hours: T, F 7:45-8:30 am

Classroom communication: blogs.4j.lane.edu/blackburn/

Prerequisites: C- or better in Geometry A and Geometry B.

Course Description: Topics include a selective review of exponents, polynomials, and graphs of linear equations from Algebra 1 and then include rational expressions, functions and function notation, inequalities, radical expressions, quadratic equations and their graphs, an introduction to exponential and logarithmic functions, and problem solving methods. Students will have the option to earn 5 college credit through Lane Community College's College Now program. This course is equivalent to Math 95 - Intermediate Algebra. It is not recommended for students planning to take College Now Precalculus.

Course Objectives: In order to successfully complete this course, the student should have demonstrated the ability to:

1. Use prerequisite concepts and skills of the arithmetic of real numbers.
2. Manipulate and evaluate expressions involving exponents, and use scientific notation.
3. Simplify expressions involving polynomials, including factoring.
4. Simplify and perform operations involving rational expressions.
5. Solve equations involving rational expressions.
6. Solve application problems leading to equations involving rational expressions.
7. Use function notation and distinguish between input and output.
8. Write the equation of a line and graph lines on a rectangular coordinate system.
9. Solve linear equations and apply linear equations to application problems.
10. Solve and graph a linear inequality, and use interval notation.
11. Simplify and perform operations involving radical expressions.
12. Solve equations involving radical expressions.
13. Solve application problems leading to equations involving rational expressions.
14. Write the square root of a negative number in terms of i , and operate with complex numbers.
15. Solve quadratic equations by taking square roots, by completing the square, and by the quadratic formula.
16. Given a quadratic function find its vertex, axis of symmetry, and intercepts, and graph the parabola.
17. Model and solve application problems involving quadratic equations and functions.
18. Evaluate an exponential function.
19. Translate between equivalent exponential and logarithmic notations.
20. Model and solve application problems involving exponential and logarithmic equations.

Required Materials:

- a. Required Text: *Introductory and Intermediate Algebra*, 3rd edition, Blitzer
- b. A programmable graphing calculator: TI 83 Plus or TI 84 Plus is recommended. TI 83s will work.
- c. A spiral notebook or binder to organize lesson notes, classwork, and homework.
- d. Pencils or pens.

Class Format

Most classes will begin with a warmup. The warmups will be turned in at the end of the unit with your other work. If you are absent ask your classmates what the warmup was and complete it. During warmup time, attendance will be taken. After the warmup, we will go over homework questions, then proceed to new material. There will be quizzes or in-class assignments on some days instead of new material.

Assessments

For each objective, students will demonstrate their knowledge through in class exams, quizzes, discussions, and/or group work activities.

Assignments

Homework will be assigned on a weekly basis and due on the last day of each unit. Assignments will be uploaded every week onto my website. No late work will be accepted. Homework will be graded on accuracy and completion.

Late Work

Homework and class work will be collected on the last day of each unit. If you are absent on that day you will turn it in the first day you get back. Otherwise you will turn in your assignments on the last day of the unit.

Grading

You will be assigned a letter grade on your transcript based on the following breakdown: 45% of your grade will be based on tests and projects, 30% on quizzes, and 25% on homework and other assignments. Pass/no pass is an option for this course. This must be arranged prior to midterms and agreed upon by me, your parents, and the counselors.

Percentage	Letter Grade		Percentage	Letter Grade
98 - 100.00%	A +		77 - 79.99%	C+
93 - 97.99%	A		73 - 76.99%	C
90 - 92.99%	A-		70 - 72.99%	C-
87 - 89.99%	B+		67 - 69.99%	D+
83 - 86.99%	B		63 - 66.99%	D
80 - 82.99%	B-		60 - 62.99%	D -
			< 60%	F

Attendance Policy

By district policy, I am required to submit attendance online within the first ten minutes of class. If you come to class after the ten minutes are up, you will be marked very late.

Getting Help

1. I am available for office hours before school on Tuesday and Friday for extra help from 7:45-8:30.
2. Consult with classmates and form study groups – math doesn't have to be a solitary struggle.
3. Get help from a free or paid tutor.
4. Consult my website for lesson notes and videos.

Si necesita más información en Español sobre esta clase, por favor comuníquese con Paola Massingham al 541-790-5151 o por correo electrónico massingham_p@4j.lane.edu

Classroom expectations

Work Hard & Be Nice to People

Procedures are a part of life. We follow procedures for using a telephone, boarding an airplane, approaching a traffic light and attending a wedding. The reason we have procedures in life is so that people can function in society knowing the acceptable and efficient ways people do things. There are also procedures in this classroom. These procedures establish our classroom culture. Procedures are not rules; they are set guidelines and expectations on how things will happen in this classroom.

Entering the classroom

After you find your seat, take out your notebook and other supplies so that you are ready when the bell rings.

Asking a question

If you have a question that would be beneficial for the rest of the class to know the answer to, please raise your hand and wait to be called on; otherwise, please wait to ask quietly during work time or after class.

When you need supplies

If you need a paper or pencil, please help yourself at the supply station. Please do so quickly and quietly as to not disrupt the class.

Using the supplies

Please use the supplies for their intended purpose (putting information in your notebook). Scissors should only be used for cutting paper. Recycle all scraps in the recycling bin

Responding to a request for your attention

When you hear the cue, "Folks, may I have your attention," quiet your voices, put your pencils down and be ready to listen. If it takes longer than five seconds to gain the classes' attention, the additional time will be taken from passing time.

When you are absent

Notes missed in class will be posted on my blog. Please have those copied into your notebook before you come back to class. Ask me for any worksheets you may have missed.

When you need to use the restroom

If you need to go to the bathroom, ask for permission & take the hall pass. Only one person is allowed out of the room at a time, so if the pass is gone, you will need to wait until they return (exceptions for emergencies). Please go to the restroom and return quickly (≤ 5 minutes) out of respect for anyone else who may need to go.

Working with others

We will frequently be working in groups or partners. You will be expected to work cooperatively regardless of whether you've been assigned to work with friends. Voices should remain low enough that only those in your group can hear you. If desks need to be moved (in order to get into groups or back into rows), please do so quickly and quietly as to not disturb the classroom next door. More expectations for working in groups will be decided as a class and posted in the classroom for reference.

Electronic devices

Texting, snapchatting, tweeting and checking Instagram, etc. are not appropriate activities during class time. Cellphones should be silenced and away during class-time. Headphones and earbuds should be out of sight. If you are using your cellphone during class time, it will be taken away for the remainder of the class period and daily points will be deducted.

How to be Successful as a Mathematics Student

Teachers always tell you to work hard. But why? If it comes easy and you get an easy A that's what's important, right? Wrong!! The reason you should work hard is because it makes you smarter – you gain intelligence. Yes, that's right, you can *grow your intelligence!* Each and every one of you has a chance to develop into an outstanding mathematician. So we're back to this work harder thing. In my class working harder means to try every single problem that is put in front of you. You will make mistakes, and that's a *good thing!* By making mistakes you will learn how to deal with adversity. How do you think astronauts are chosen for a mission? They choose the ones that bounce back from failure, not the ones who are successful all the time. So if you love challenges, are intrigued by mistakes, enjoy effort, seek new strategies, and keep on learning you're going to do great!