



Course Description: Building on their work with linear, quadratic, and exponential functions, students extend their repertoire of functions to include polynomial, rational, and radical functions. Students work closely with the expressions that define the functions, and continue to expand and hone their abilities to model situations and to solve equations, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms. The Mathematical Practice Standards apply throughout this course and together with the content standards says that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

Course Overview

| Quarter | Unit | Topics Covered |
|----------------|-----------------------------------|--|
| 1 | 1-Linear Functions | Solving Equations, Literal Equations, Inequalities, Function Rules, Relations, Forms of Linear Equations, Graphing, Systems of Equations, Arithmetic Sequences |
| 1 | 2-Quadratic Functions | Solving Equations, Complex and Real Solutions, Application Equations, Graphing, Properties, Factoring, Vertex Form, Transformations, System of Equations |
| 2 | 3-Polynomial Functions | Add, Subtract, Multiply, and Divide Polynomials, Graphing, Properties of Graphs, Systems of Equations |
| 2 | 4-Radical Functions | Properties of Exponents, Solving Radical Equations, Inverses, Graphing Radical Functions, Graphing Piecewise Functions, Transformations, Application Equations |
| 2 | 5-Exponential Functions | Exponential Properties/Graphs, Literal Equations, Transformations, Arithmetic and Geometries Sequences |
| 2 | Semester Exam | |
| 3 | 5-Exponential Functions Continued | Exponentials Properties/Graphs, Application Equations, Transformations, Geometric Sequences |
| 3 | 6- Logarithmic Functions | Logarithmic Properties/Graphs, Application Equations, Transformations |
| 3 | 7-Rational Functions | Rewrite and Solve Rational Equations, Application Problems |
| 4 | 8-Statistics and Probability | Applications, Sample Mean, Standard Deviation, Scatter Plots, Analyzing Graphs, Sample Spaces, Conditional Probability |
| 4 | 9-Trigonometric Functions | Unit Circle, Trigonometric Identities, Graphing sine and cosine functions |
| 4 | Final Exam | |

WELCOME TO ALGEBRA 2!

Materials Required: Binder (1" or larger), pencils.

A scientific calculator is a useful tool, cell phone calculators are prohibited.

Grading Policy: You turn it in promptly, it will be graded promptly. Double check your score with the grade book score, kindly inform me if I made a mistake.

Technology: Phones may be used for educational purposes at specified times. All other times, phones should be put away so to not distract from your education. Cell phones and other electronic devices may not be out during class. Please note that electronics out during a summative or specified formative will result in disciplinary action.

Assessments: I gather information for two distinct reasons: to make instructional decisions (diagnostic and formative assessment) and to communicate a summary of my students' achievement (summative assessment).

Formative: Independent practice, classwork, bell-ringers and discussion participation are the most common. I must assess the learning of my students frequently in order to evaluate the effectiveness of instruction and plan for future instruction.

Summative: Tests, quizzes and projects are the most common. These are essential to report card grading.

Honor Code: Be Honest! If caught cheating/copying on a formative, you earn a zero. If you are caught cheating on a summative, you earn a zero until a replacement test is taken and you FORFEIT the RETAKE option and earn a referral.

Submission and Make-Up Policies: Assignments may consist of textbook problems, worksheets, mini projects, group activities, and writing activities. Assignments are expected to be completed by the specified due date, normally being the following day, but always before a summative.

If you are absent: ask a student first for any missed notes, refer to the assignment board to see if you need any additional materials. Check the "Did you miss class?" folder for handouts.

Summative Make-Up: do it as soon as possible, must be before the next summative.

Retakes/Interventions: Students with grades of 70% or lower on each standard portion* for a test must attend office hours for remediation and then retake that portion of the test.

The remediation and retest must be completed before the next test date.

*The test will be sectioned according to specific standards. Students will only need to remediate and retest the sections of the test with scores below 70%, this may be one or multiple sections depending on performance.

Office hours: Office hours are available Mondays, Tuesdays, Thursdays and Fridays. Please take advantage of this opportunity for remediation, review, and retesting. I am here to support you, please use this time set aside in our schedules to its full advantage. Please sign in/out and state what was worked on during the office hours.

Classroom Expectations:

- Be prompt, polite and prepared for the day's activities. Have binder, previous day's assignment, paper, pencil, and calculator ready when the bell rings.
- Respect your teacher and fellow students. Listen when someone else has the floor. When you're talking, you're not listening, and when you're not listening, you're not learning. We all learn from each other!
- Follow all rules as found in the Student Code of Conduct, including the Mandatory Uniform Policy.

I BELIEVE that **ALL** students have the ability to succeed with hard work and determination. Please come to class with a positive, ready to learn attitude.

I'm so excited to have you in my class this year; it's going to be a great year!!

Mrs. Mayr

Mission Statement

"Panthers will excel through diversity, seize technology...create the future."

School: Pine Ridge High School

Date: 8/13/19

Teacher: R. Mayr

Course: Algebra 2

PARENT PERMISSION FORM for Students Viewing a “PG” or “PG-13”
Rated Movie Clips or YouTube Clips

Dear Parent/Guardian,

In the class we like to show students the usefulness of math and how it applies to our everyday lives. Algebra 2 is not just found in a textbook. Math is used for many daily things. As a result, we will be using a wide range of non-traditional instructional materials of high academic merit including appropriate and **instructionally related** movie clips rated G or PG, Safari Montage and Internet access.

I grant permission for my child, _____

Signature of parent/guardian, _____

Date _____

Mission Statement

"Panthers will excel through diversity, seize technology...create the future."