

# Algebra 2

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## Syllabus

### The Power Standards

#### Number Sets and Properties

1. Identify number sets
2. Demonstrate knowledge of properties
3. Solve equations using inverse operations

#### Algebra Skill Review

4. Identify, write and graph standard form equations
5. Identify, write and graph slope-intercept equations
6. Write and graph point-slope form equations
7. Identify, write and graph parallel and perpendicular lines
8. Write linear regression equations using data collection

#### Functions

9. Determine if an equation is a function
10. Write and graph absolute value functions

#### Systems of Inequalities

11. Graph systems of inequalities

#### Investigate real life problems using linear programming

12. Identify feasible regions for a graph and the vertices
13. Use vertices to determine minimum and maximum values

#### Matrices

14. Add, subtract, and multiply matrices
15. Solve systems of equations with matrices

#### Quadratic Equations

16. Identify the axis of symmetry and the vertex from vertex form
17. Identify the axis of symmetry and the vertex from x-intercept form



18. Factor and apply zero product property
19. Use quadratic formula to solve for  $x$
20. Use the discriminant to find the number of real solutions for the Quadratic formula

#### Complex and Imaginary Numbers

21. Simplify square roots
22. Add, subtract, multiply and divide complex and imaginary numbers

#### Polynomials

23. Reorder polynomials into standard form and classify
24. Add and subtract polynomials
25. Multiply polynomials
26. Factor polynomials

#### Sequence and Series

27. Identify whether a sequence is arithmetic, geometric or neither
28. Find single terms and sums for arithmetic series
29. Find single terms and sums for geometric series

### Supplies required for class

- A Positive Attitude
- A Mind willing to learn
- Pencils and Eraser
- A 3 ring binder with loose leaf paper
- A graphing calculator (i.e. TI-83, TI-83 Plus, TI-84, or TI-84 Plus)
- Dry Eraser Marker



#### Grading Scale

100 % — 95 %	<b>A</b>
94.99% — 93%	<b>A-</b>
92.99% — 91%	<b>B+</b>
90.99% — 87%	<b>B</b>
86.99% — 85%	<b>B-</b>
84.99% — 83%	<b>C+</b>
82.99% — 79%	<b>C</b>
78.99% — 77%	<b>C-</b>
76.99% — 75%	<b>D+</b>
74.99% — 72%	<b>D</b>
71.99% — 70%	<b>D-</b>
69.99% & below	<b>F</b>

## Course Evaluation

#### Assessments

Assessments which include tests, quizzes, and projects will account for 80% of your grade. Tests will usually come at the end of a chapter and will include previous power standard knowledge to ensure learning is retained.

#### Portfolio

Your portfolio will be evaluated for the other 20% of your total grade. A portfolio rubric will be given to you for your portfolio. Please be sure to follow the directions and work on it throughout the course.

#### Behavior

Your behavior is graded this year in four individual areas. The grade for behavior will be separate from your academic grade. The areas are effort, participation, respect, and responsibility.

## Classroom Expectations

- A. **Always be respectful of others.** This includes the other people in the class, their ideas, their belongings, their time, and their emotions (no gossip, cursing/swearing, teasing, etc.)
- B. **Be on time for class.** This means you are in your seat and working when the bell rings. The bell does not end the class, I do. The bell is my reminder that class is to end. Every student needs to be in their seat before I dismiss the class. You will be allowed one tardy per quarter. If you are late without a pass, you will receive a detention.
- C. **Be prepared for class.** You will need to bring your covered textbook, pencils, eraser, 3 ring binder, composition book, graphing calculator, dry erase marker, and your work everyday. In addition, a positive attitude and a mind willing to learn are a must. Algebra 2 is full of small group learning experiences so a spirit of respect, cooperation, teamwork and fun is essential.
- D. **Three hall passes will be given for the class.** Once they are used or lost, the student may not leave the room. If the student insists on leaving, he/she shall serve a detention before or after school.
- E. **Raise your hand and wait for permission to speak or leave your seat.** This allows everyone to participate and avoids disruptions. Talking will be allowed during work time as long as it is quiet and concerns the subject matter we are focusing on.
- F. **Follow instructions the first time they are given.** This will give you more time to work on assignments and to ask questions.
- C. **3rd time: 20 minutes before or after school with me,\* a call home and completing a Make It Right Sheet**
- D. **4th time: Removal from the classroom, an individual conference with me, and a call home in addition to 20 minutes before or after school with me,\* and completing a Make It Right Sheet**
- E. **Severe Clause: If your poor choice is severe enough you will immediately be sent to the office in addition to everything in the aforementioned section.**

\* Failure to serve detentions with me within 2 days will result in a referral and serving the detention for double the original length.

**There are only two ways to fail.**

**One is to think but not do.**

**And the other is to do but not think.**



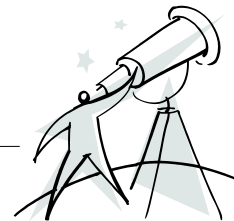
**If You Choose To Break a Rule:**

- A. 1st time: Verbal Warning
- B. 2nd time: 1 minute after class with me and a call home

## A Word on Technology

Your graphing calculator is a tool for using in the classroom and on your homework, not a toy. If you are caught playing games on your calculator during class, I shall confiscate the calculator and remove the game program(s). Additionally, your parents shall be notified since this will be viewed as inappropriate behavior, insubordination, and classroom misconduct.

I realize a calculator is expensive, however it should be viewed as an investment in your future since you will be able to use it for the years you are at Kewaskum High School, on your ACT or SAT, and during your post-secondary education and even in your future career. Please be sure to put your name on it so it can be easily identified as yours. An engraver is available for your use.



**Go above and beyond.**

**Soar — Be extraordinary!**

**Ask about the 100 Club!**

Go

A ssignment completed first

B e productive

O ffer assistance

V alidate your answers

E valuate your work.

&

B rain Teasers

E njoy reading and writing

Y our Portfolio

O rganize

N umber Games

D raw

## Additional Help

Extra help is available, just ask. I will work with you. I will be available before and after school most days or by appointment. Consider stopping by before school if you had difficulty with the assignment the night before. Also, my home phone number is on the top of this syllabus. If you are puzzled while doing your assignment, just give me a call.

Help is available through McDougal Little as well. You can visit their website: [www.classzone.com](http://www.classzone.com). There you will find homework help, practice problems, practice assessments, games and other activities.

