

Principles of Algebra and Geometry ☺

Vision Charter School

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Course Purpose

To prepare students for future algebra courses through the study of pre-algebra while continuing to build a strong concrete mathematics foundation.

*Brief Year Outline

1. Data Interpretation

- Organizing Data, Bar Graph
- Guess and Check Tables
- Scaling
- Stem and Leaf Plots
- Quartiles
- Measures of Central Tendency
- Diamond Problems
- Scatter Plots
- Double Line Graphs

2. Integer Operations and Graphing Equations

- Ordered Pairs
- Functions
- Variables
- X- and Y- intercepts
- Absolute Value
- Integers
- Graphing a Parabola
- Parabolas

3. Probability and Fractions

- Probability and Fractions
- Probability and Rectangles
- Identity Property
- Equivalent Fractions
- Decimals and Percents
- Numerical Combinations

4. Algebraic Sentences

- Order of Operations
- Distributive Property
- Combining Like Terms
- Algebra Tiles
- Writing Equations
- Factoring

5. Solving Equations

- Equivalent Quantities
- One and Two Step Equations
- Algebraic Equations
- Additive Identity
- Graph a System of Equations
- Distributive Property
- Graph a System of Equations
- Interpret Point of Intersection

6. Ratios and Proportions

- Ratios and Proportions
- Parallelograms
- Triangles
- Trapezoids
- Area and Circumference
- Similar Figures and Ratios
- Similar Figures and Proportions

7. Division of Fractions, Percents, and Formulas

- Division of Fractions; Reciprocals
- Fractional Coefficient Equations
- Simple and Compound Interest
- Mark-up and Selling Prices
- Discount and Sale Prices
- Percent of Increase and Decrease
- Writing Formulas
- Literal Equations
- Distance, Rate and Time

8. The Pythagorean Theorem, Surface Area and Volume

- Right Triangle
- Pythagorean Theorem
- Square Numbers, Square Roots
- Pythagorean Theorem
- Area and Subproblems
- Mat Plans: Prisms
- Volume of Prisms
- Surface Area of Prisms
- Volume of Cylinders
- Surface Area of Cylinders

9. Slopes and Rate of Change

- Lines: Direction and Steepness
- Calculating the Rate of Change
- Ratios and Slope Triangles
- Rates of Change and Slope
- Slope, Rate of Change and Equation of a Line
- Scatter Plots, Line of Best Fit
- Inequalities

10. Exponents, Scientific Notation, and Volume

- Cube Growth
- Area and Volume Growth
- Volume of a Cone

- Laws of Exponents
- Powers of 10; Intersecting Planes
- Scientific Notation

*As designed by College Preparatory Mathematics. Please see course glossary and text for a detailed view of material covered; in addition to, curriculum guide and state standards.

** Equations, properties and logic problems are continually used throughout the year.

Student Expectations

RESPONSIBILITY

- Be on time, be prepared and be ready to learn.
- Be responsible for yourself, your materials, and your actions.
- Follow all classroom procedures and ask questions if you don't understand.

RESPECT

- Respect yourself, respect others, respect the school and school property.
- Listen to others and they will listen to you.
- Be kind with your words and your actions.

HONESTY

- Build relationships founded on trust, with your teachers and fellow classmates.
- Be honest with everyone especially yourself.

CARING

- Love everyone (enemies too!)
- Contribute to the learning environment by expressing a caring attitude to everyone.
- Work together to solve problems, because everyone has an important role to play.

Rewards

- Students, who follow classroom expectations, are referral free and maintain a 2.0 average in each core class will be invited to attend a school social at the conclusion of each quarter.
- Students caught exhibiting "Golden Eagle" behavior will earn special recognition.
- Students working to their highest potential will learn the importance and value of education.

Consequences

- Students will make-up misuse of time during recess periods or after school. This includes time wasted by talking or doing anything other than the assigned activity.
- Negative behavior will result in school detention. The teacher will determine if a parent signature is required on the detention slip.
- Repeated negative behavior or severe classroom disruption will result in an office referral.

Mandatory Supplies

1. Pencils- Students should have more than one pencil and it is strongly recommended that they sharpen their pencils before class begins to reduce class disruptions. Also, no homework will be accepted in pen.
2. Notebook supplies per CORE.
3. Scientific Calculator
4. Graphing Paper

5. Note/Index Cards
6. Items from general supply list

Assessment Criteria for Each 9 Week Grading Period

Four general areas are considered when evaluating the student’s progress.

1. Class Work and Class Participation- this includes completeness and neatness of the CORE binder (math section only).
2. Homework-Students are expected to complete homework on time. Late homework assignments will not be accepted for credit. Students with excused absences will be given two extra class day for each consecutive class missed. It is the student’s responsibility to acquire all absent homework. Students with unexcused absences or absences due to field trips or other extra-curricular activities must turn in all assigned work before leaving and will be responsible for that day’s assignments.
3. Projects- Various math projects will be assigned throughout the year. Rubrics and directions will be provided for each project.
4. Assessments- will be given each chapter. Students who do not pass tests with at least a 75% will have mandatory corrections. Peer study sessions will be available for students after school prior to each test. There will be no test corrections offered for quizzes. Students will take notebook, warm-up and review quizzes. Quizzes will typically not be announced.
5. Semester Exams -A comprehensive exam will be given at the end of each semester. There will be no test corrections for the Semester Exam. After school review sessions will be made available to all students wanting extra review prior to the exam.

Point Distribution

In Class Assignments and Participation	15%
Homework	20%
Tests	30%
Quizzes	10%
Quarterly Exam	15%
Math Project	10%

For both middle school and high school transcripts, grades are dependent on semesters, not quarters. Quarters are essentially a progress report grade for the semester. VCS will continue to give quarter grades, but the semester grades will be based on the entire points for the semester instead of an average of the two quarter grades.

Teacher Assistance

Assistance will be made available by appointment. Reviews will be offered prior to any chapter tests and before quarterly exams.

Grade Scale

4.0 Scale

Percentage	Letter Grade	Scale Value
100-98	A+	4.0
97-94	A	4.0
93-90	A-	3.67
89-87	B+	3.33
86-84	B	3.0
83-80	B-	2.67
79-77	C+	2.33
76-74	C	2.0
73-70	C-	1.67
69-67	D+	1.33
67-60	D	1.0
59-0	F	0.0

* Students will receive one grade report per quarter (approximately at 4 ½ weeks). It is the student's responsibility to share reports with parents and/or guardians. Please note that semester exams are worth 15% of the student's final grade and can significantly impact his or her grade. The quarterly exam grade will not be averaged into the student's math grade until the end of the semester.

I am looking forward to a marvelous school year. Together we will make this an amazing year of learning!

*Warmly,
Mrs. Collins*

Principles of Algebra and Geometry

I, _____ have read this document and understand the expectations and policies of the class.

I, _____ parent/guardian of the aforementioned student have read this document and will keep in contact with Mrs. Collins should questions or concerns arise.

The best way to contact parent/guardian:

Email: _____

Phone: _____

The best time to contact parent/guardian: _____