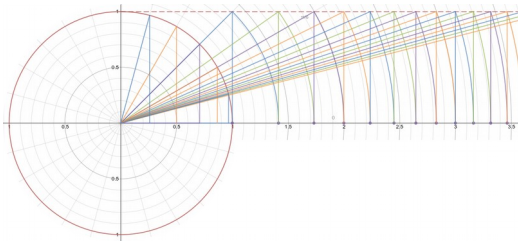

Mr. Clarkson's Math Classes
Cambridge Middle School / High School
Cambridge, Idaho 2016 / 2017 School Year
Mr. Jerry Clarkson jclarkson@cambridge432.org
Class Website: mrclarksonsmath.info

Welcome to Mathematics class,

Thank you to many of you who have already extended a welcome to Cambridge. Whereas I was originally from the Meadows Valley this move to Cambridge is much like coming back home.

Schedule

As your Cambridge MS/HS math teacher, I am teaching 7th grade through Senior Advanced Math, but not every course. Mr Schumacher is teaching Freshman Algebra I and Mr. Waggoner is teaching Senior Math in the Workplace due to a schedule conflicts and large number of materials to teach. Therefore my schedule is as follows:

	Morning		Afternoon
8:05	7th Grade Math	12:44	Preparatory Period
9:08	8th Grade Math	1:47	Advanced Mathematics (Seniors)
10:11	Algebra II (Juniors and Seniors)	2:50	Homeroom
11:14	Geometry (Sophomores)	3:08	Math Interventions (Assorted Students)
12:14	Lunch	4:08	End of the School Day

I will be available many evenings after school for tutorial assistance or consultation. For this year I have more reason to be at school than home alone so I can be available until as late as 7:00 or 8:00 p.m. I will also be seeing students as necessary during the appointed Fridays in accordance with the school calendar and will accept appointments from any student who may need assistance with Math materials.

What You Need for Class

Most of our in class study and homework we are doing digitally and paperless this year. Students should be able to do most of the homework during class time with minimal need to come in after school or on Fridays. Therefore the need for paper and pencils is minimal. You will need the following items:

A notebook or note section of your binder for taking class notes for use on tests (vocabulary, theorems, examples, etc.).

#2 pencils for tests and if you choose to work on paper. Please do not use mechanical pencils for math classes as the pencils are hard lead and produce markings to light for detailed math work. I only accept math work and tests written in a manner that I can read. I will have #2 pencils in the classroom available with conditions.

What You Do Not Need for Class

We will use internet based online calculators as necessary therefore calculators are not necessary.

Mathematics tools such as compasses, protractors, and rulers are provided in the classroom. You do not need your own.

You do not need a phone. Phones and any other electronic devices (other than necessary for medical reasons) should be completely turned off and stored deep within a backpack, in a locker, or in

the wall caddy in the classroom. Any visible phone will need to spend the duration of the period in the phone caddy on the wall or with Mr. Clarkson.

Come to class with a ready mind, a good attitude, a pencil, and a notepad!

Expectations

- Whatever you do, work at it with all your heart, with respect for all persons, places, and things.
- Make no problems and you will have no problems, except for math problems.
- If you have a problem, work it out.
- If you cause a problem I will have to do something about it.

Procedures

As you come to class, get started. Nearly every class session will begin with a warm-up or a few problems that you should be able to complete with a partner. Get started and work until we are ready to work together as a class.

If you just did not make it to class quite on time please wait patiently in the hallway until I am ready to let you in the class. You will then need to complete the warm-up work on your own time even though we may have already gone over this as a class.

We will be working together throughout each class period. The first several minutes will be the warm-up followed by reviewing the warm-up and any necessary review of previous daily work. We will continue with material to introduce us to new concepts and practice new applications. This should allow time to complete most of the daily work (sometimes called home work except that you should not need to do it at home). Near the end of each period a few minutes will be reserved for the daily exit ticket. By the time of those last few minute you should be able to prove that you understand the new concept and application enough to do one or two problems on your own without assistance (this is almost a mini quiz).

Grading

Warm-up and class dialog materials are graded on a four point system.

Points	**Criteria**	**Equivalent**
4	Student is on-time or early, actively working with a partner, helping a partner or actively seeking and accepting help, gaining a basic understand of the material, actively participating in class reviews and dialogs.	A
3	Student is getting the work done but not really helping or seeking help from a partner.	B
2	Student was late and unable to work with their partner but still gets the work done and shows understanding.	C
1	Student fails to do the work or participate.	I
0	Student refuses to work or otherwise does no work.	I

Students who miss one or more days will still be able to make up the warm-up and daily dialog work.

Daily Practice (Homework)

Points	Criteria	Equivalent
4	Student correctly works out every problem, shows all of the steps, and is willing to help others or help out in the classroom.	A
3	Student is basically understanding and has completed 80% of the work.	B
2	Student is struggling but has completed at least 70% of the work.	C
I	Student fails to complete the work.	I

The goal of the daily work is to practice and complete all of the work before taking a test. Students are encouraged to keep at the practice until all of the work is finished and the student better understands the principles. Therefore 3 and 4 point work is expected prior to taking a test.

Tests are graded on a percentage and a rubric of expected results will be posted before each test. Students are encouraged to retake each test until they achieve a satisfactory grade. Student who have not satisfactorily completed their daily work will postpone each test until they are well prepared for the test and therefore need to take the test after school of on a Friday by appointment. Late test are graded as incomplete until taken.

Class Notes – After each test student will submit their class notes for quick review. I will be checking for thorough notes with all of the vocabulary and necessary examples. Notes will be graded as 4 – quite thorough, 3 – lacking in some points, 2 less that sufficient, I – really insufficient or not submitted.

Personal Finance – Most classes will participate in a year long personal finance practice. Personal Finance grades are based on participation and performance on a four point scale. Performance of one's financial portfolio is relative to the rest of the class, therefore the students with the best participation and performance receive the better points. Students will only earn an incomplete grade if they fail to participate or somehow go into debt.

Projects – Some of the classes will have quarter, semester, or year long projects. These projects are prepared in sections and each section is graded. The projects are group work with some individual components. Projects are also graded on a four point system with evident participation and cooperation considered for 4 point work.

Extra Consideration – Student may be awarded extra points for extra classroom activities arranged under contract with Mr. Clarkson.

The Cumulative Grade

Activity	*Class with Project*	*Class without Project*
Warm-up	5%	5%
Daily Dialog	5%	5%
Daily Practice	7.5%	7.5%
Exit Tickets	7.5%	7.5%
Class Notes	5%	5%
Personal Finance	5%	5%
Projects	15%	
Tests	50%	65%
Extra Consideration	Extra Points	Extra Points

About Mr. Clarkson

My wife and I are in the process of moving to Cambridge. We have rented a house nearby from which I may walk to and from school. My wife continues to teach this year in Nampa as we prepare our house there for rental or for sale. Therefore she will be coming to Cambridge some weekends while I will be going to Nampa other weekends. I will often be available to help students after school and on appointed Fridays but generally not available on weekends. Otherwise, students will soon learn about many of my other experiences in various positions and various lands. A few more details are on the class website (mrclarksonsmath.info). I look forward to a good year and several future years with each student.

First Assignment

Each student's first assignment is to assure that they have thoroughly read this document with their parents. In order to complete this assignment please complete the following on-line form: https://goo.gl/forms/Qbc8eRY7WTbL8g413. Student without home access to the internet are provided with this form printed on paper.

Syllabus Reading Response

Student's Name as recorded on school records

_____

Student's Class with Mr. Clarkson (choose one of the following)

1. Seventh Grade Math
2. Eighth Grade Math
3. Geometry
4. Algebra II
5. Advanced Mathematics
6. Math Intervention only

Has the student fully read the syllabus?
True False

Has the parent(s) fully read the syllabus?
True False

Parent contact phone number

_____

Parent contact e-mail address

_____

Any questions about the syllabus?

Seventh Grade Math

Seventh Grade Math students develop their understanding of ratios, rates, and proportions that they learned in sixth grade to solve single-step and multi-step problems. These problems include life skills of discount calculations, interest, taxes, tips, as well as scale drawings and slope. Students examine the rational numbers, positive and negative, including fractions and decimals and discover methods for complex addition, subtraction, multiplication and division of these numbers. Seventh graders continue the exploration of geometry including construction of 2D and 3D shapes as well as calculating the surface area and volume of those shapes. Additionally students begin to study populations and probability models.

This list is the Module (chapter) and Topic (section) titles for the year of Seventh Grade Math. The dates listed are preliminary approximate starting dates for each topic. The dates may be adjusted as the year progresses. Each module has an end of module assessment (test) immediately before continuing to the next module and most of the modules also have a mid module assessment.

Module	Topic	Description	Date
1		*Ratios and Proportional Relationships*	08/29/16
1	A	Proportional Relationships	08/29/16
1	B	Unit Rate and the Constant of Proportionality	09/06/16
1	C	Ratios and Rates Involving Fractions	09/13/16
1	D	Ratios of Scale Drawings	09/20/16
2		*Rational Numbers*	10/03/16
2	A	Addition and Subtraction of Integers and Rational Numbers	10/03/16
2	B	Multiplication and Division of Integers and Rational Numbers	10/17/16
2	C	Applying Operations with Rational Numbers to Expressions and Equations	10/27/16
3		*Expressions and Equations*	11/09/16
3	A	Use Properties of Operations to Generate Equivalent Expressions	11/09/16
3	B	Solve Problems Using Expressions, Equations, and Inequalities	11/16/16
3	C	Use Equations and Inequalities to Solve Geometry Problems	12/07/16
4		Percent and Proportional Relationships	01/03/17
5		*Statistics and Probability*	02/07/17
4	A	Finding the Whole	01/03/17
4	B	Percent Problems Including More Than One Whole	01/12/17
4	C	Scale Drawings	01/24/17
4	D	Population, Mixture, and Counting Problems Involving Percents	01/31/17
5	A	Calculating and Interpreting Probabilities	02/07/17
5	B	Estimating Probabilities	02/21/17
5	C	Random Sampling and Estimating Population Characteristics	03/01/17
5	D	Comparing Populations	03/15/17
6		*Geometry*	04/03/17
6	A	Unknown Angles	04/03/17
6	B	Constructing Triangles	04/05/17
6	C	Slicing Solids	04/26/17
6	D	Problems Involving Area and Surface Area	05/03/17
6	E	Problems Involving Volume	05/10/17

Eight Grade Math

Eighth Grade Math is linear! Eighth Grade students relate ratios, rates, proportions, and percentages learned in earlier years to linear graphs and linear equations. Student compare linear function equations and find common points of two or more equations. Together, we use lines and linear equations to model life activities as well as geometric figures. Modification of line functions also show the movement of geographic figures. Students additionally expand their understanding of numbers to include radicals and non-rational numbers. These activities serve to well prepare eighth graders for upcoming high school Algebra and Geometry classes.

This list is the Module (chapter) and Topic (section) titles for the year of Eighth Grade Math. The dates listed are preliminary approximate starting dates for each topic. The dates may be adjusted as the year progresses. Each module has an end of module assessment (test) immediately before continuing to the next module and most of the modules also have a mid module assessment.

Module	**Topic**	**Description**	**Date**
1		*Integer Exponents and Scientific Notation*	08/29/16
1	A	Exponential Notation and Properties of Integer Exponents	08/29/16
1	B	Magnitude and Scientific Notation	09/12/16
2		*The Concept of Congruence*	09/26/16
2	A	Definitions and Properties of the Basic Rigid Motions	09/26/16
2	B	Sequencing the Basic Rigid Motions	10/05/16
2	C	Congruence and Angle Relationships	10/13/16
2	D	The Pythagorean Theorem	10/24/16
3		*Similarity*	10/26/16
3	A	Dilation	10/26/16
3	B	Similar Figures	11/09/16
3	C	The Pythagorean Theorem	11/21/16
4		*Linear Equations*	12/01/16
4	A	Writing and Solving Linear Equations	12/01/16
4	B	Linear Equations in Two Variables and Their Graphs	12/12/16
4	C	Slope and Equations of Lines	01/03/17
4	D	Systems of Linear Equations and Their Solutions	01/18/17
4	E	(Optional) Pythagorean Theorem	01/31/17
5		*Examples of Functions from Geometry*	02/02/17
5	A	Functions	02/02/17
5	B	Volume	02/16/17
6		*Linear Functions*	02/27/17
6	A	Linear Functions	02/27/17
6	B	Bivariate Numerical Data	03/06/17
6	C	Linear and Nonlinear Models	03/14/17
6	D	Bivariate Categorical Data	03/20/17
7		*Introduction to Irrational Numbers Using Geometry*	04/03/17
7	A	Square and Cube Roots	04/03/17
7	B	Decimal Expansions of Numbers	04/11/17
7	C	The Pythagorean Theorem	04/27/17
7	D	Applications of Radicals and Roots	05/04/17

Geometry

Geometry is the study of the measurement of the earth and all that is in or on the earth. This study began with the Arabic, Persian, and Greek need to survey the earth and build large stone edifices. The study of Geometry facilitates the investigation of the larger universe today. Students learn the comparison of Geometric shapes and the transformation of figures on a coordinate plane. Students also discover the special relationships of triangles and trigonometry. They begin to examine the characteristics of circles, arcs, and sectors, as well as conic sections forming parabolas and ellipsis. Using geometry students by the end of the course should be able to calculate the volume of geometric three dimensional shapes like a tank, barrel, or storage box. Algebra and Geometry are integrated skills learned and used simultaneously.

This list is the Module (chapter) and Topic (section) titles for the year for Geometry. The dates listed are preliminary approximate starting dates for each topic. The dates may be adjusted as the year progresses. Each module has an end of module assessment (test) immediately before continuing to the next module and most of the modules also have a mid module assessment. The end of the year may include an additional study of Trigonometry and topics for Algebra II.

Module	Topic	Description	Date
1		Congruence, Proof, and Constructions	08/29/16
1	A	Basic Constructions	08/29/16
1	B	Unknown Angles	09/07/16
1	C	Transformations/Rigid Motions	09/19/16
1	D	Congruence	10/06/16
1	E	Proving Properties of Geometric Figures	10/18/16
1	F	Advanced Constructions	10/24/16
1	G	Axiomatic Systems	10/26/16
2		Similarity, Proof, and Trigonometry	10/31/16
2	A	Scale Drawings (G-SRT.A.1, G-SRT.B.4, G-MG.A.3)	10/31/16
2	B	Dilations (G-SRT.A.1, G-SRT.B.4)	11/08/16
2	C	Similarity and Dilations (G-SRT.A.2, G-SRT.A.3, G-SRT.B.5, G-MG.A.1)	11/17/16
2	D	Applying Similarity to Right Triangles (G-SRT.B.4)	12/08/16
2	E	Trigonometry (G-SRT.C.6, G-SRT.C.7, G-SRT.C.8)	12/15/16
3		Extending to Three Dimensions	01/16/17
3	A	Area	01/16/17
3	B	Volume	01/23/17
4		Connecting Algebra and Geometry Through Coordinates	02/07/17
4	A	Rectangular and Triangular Regions Defined by Inequalities	02/07/17
4	B	Perpendicular and Parallel Lines in the Cartesian Plane	02/14/17
4	C	Perimeters and Areas of Polygonal Regions in the Cartesian Plane	02/23/17
4	D	Partitioning and Extending Segments and Parameterization of Lines	03/01/17
5		Circles With and Without Coordinates	03/13/17
5	A	Central and Inscribed Angles	03/13/17
5	B	Arcs and Sectors	03/22/17
5	C	Secants and Tangents	04/06/17
5	D	Equations for Circles and Their Tangents	04/18/17
5	E	Cyclic Quadrilaterals and Ptolemy’s Theorem	04/24/17

Algebra II

Algebra II students build on algebraic and geometric skills learned earlier to develop advanced algebra skills such as systems of equations, advanced polynomials, imaginary and complex numbers, quadratics, and including the study of trigonometric functions as well as an introduction to matrices and their properties. The contents of this course is important for students' success on both the ACT and college mathematics entrance exams. Algebra II concepts are also essential to accounting, business administration, engineering and construction, computer programming and computer science, chemistry, astronomy and many other science, engineering, and technology professions.

This list is the Module (chapter) and Topic (section) titles for the year for Algebra II. The dates listed are preliminary approximate starting dates for each topic. The dates may be adjusted as the year progresses. Each module has an end of module assessment (test) immediately before continuing to the next module and most of the modules also have a mid module assessment.