# Algebra 1: B

Winter 2019 - Victor Castorini (castoriniv@nclack.k12.or.us)

Course Description

To be a mathematician is to be a logical problem solver.

You will have problems. Some will be mathematical. You will need to do your budget, file taxes, scale a recipe, etc. All of this is basic algebra. However, the truly meaningful problems in life require a brain that is disciplined and logical. More than anything what we'll be doing in here is developing those underlying habits of mathematical thinking and interaction, or as I will often call it, your mathematical brain.
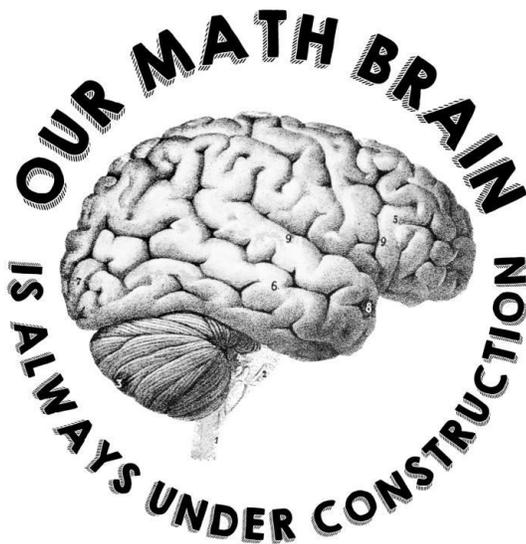
It is my belief that all students can learn to think logically through math. It is my belief that these habits of interaction help students build critical thinking and reasoning that are useful in a far greater capacity that math itself.

The academic goal of this course is to begin building the foundations of secondary math by developing mathematically productive habits and routines. We will be **making sense** of the math by **justifying why** things work and **generalizing** math operations with **conjectures**.

To do this we must:

- Reason about mathematical regularity, patterns, and structures that are repeatable.
- Create and reason from mathematical representations - visual models, graphs, equations, situations, symbols, etc.
- Notice and reason about connections within and across mathematical representations
- Explore mistakes and stuck points to start new lines of reasoning and learning
- Use metacognition and reflection to think about thinking
- Persevere and seek more! Welcome challenging problems and explore new problems!

This work is challenging and we cannot do it alone. We will need to work together to collaborative discover the truth about mathematics to make sense of it. We will interact with each other by practicing the following habits:

- Use <u>private reasoning time</u> to develop our own understanding of problems;
- <u>Explain</u> to others what we know and understand;
- <u>Listen to understand</u> what other think and learn from them;
- <u>Ask genuine questions</u> about the problems we see to each other;
- <u>Explore multiple pathways</u> as there are multiple ways to solve problems;
- <u>Compare our logic and ideas</u> to better see how others think;
- <u>Critique and debate</u> our ideas to find the best possible method;
- Recognize that <u>math reasoning is the authority</u>, not the teacher, test, grade, or points.

Logic and math exist, awaiting to be discovered. We can only see it when we train our brains to recognize these beautiful patterns and relationships that exist whether or not we see them. I greatly look forward in guiding you on this journey towards unlocking your logical, mathematical brain.

Course Objectives

Algebra 1 is a three term course for 1 math credit and 0.5 elective credit. I slow it down to ensure students have time to build their mathematical foundation and to have time to develop logical reasoning.

All material is from the Math Vision Project, a Common Core aligned curriculum available for free online at mathematicsvisionproject.org. We will use the Algebra 1 course with some supplemental material drawn from other courses and resources to meet the North Clackamas School District's higher standards.

In section B we will cover the following topics:

- Module 5: System of Equations and Inequalities
- Module 6: Quadratic Functions
- Module 7: Structures of Expressions

Course Calendar

Here is the first plan for how we will navigate the first four units this fall. This plan has a very high probability of changing but it's always good to have a plan even when you know you will have to be flexible.

Week	M	Tu	W	Th	F
W1 1/7	5.1	*School Activity*	*School Activity*	*School Activity*	*School Activity*
W2 1/14	5.2	5.3	5.4	Work Review	*{Symposium}*
W3 1/21	**MLK Day**	Quiz 5.1-5.4	5.5	5.6	5.7 (½ day)
W4 1/28	5.8 (½ day)	Review (½ day)	Review (½ Day)	**No School**	**No School**
W5 2/4	5.11	5.12	Review	Quiz 5.9-5.12	Review
W6 2/11	Test 1 Module 5	6.1	6.2	6.3/Review	*{Symposium}*
W7 2/18	**Presidents' Day**	Quiz 6.1-6.3	6.4	6.5	6.6
W8 2/25	Review	Quiz 6.4-6.6	Review	Test Module 6	7.1
WS 3/4	7.2	7.3	7.4	Review	Quiz 7.1-7.4
W9 3/11	7.5	7.6	7.7	7.8	Review
W10 3/18 Finals Week	Quiz 7.5-7.8	Review	Test Module 7 (7.1-7.8)	*Field Trip*	No School

Bold = no school
Italics = non-curriculum school day

Homework packets are collected day of quiz
Homework may be submitted late for max score of 2 up to one week after original due date. No points for homework after one week expires.
Test scores lower than 2.5 can be improved up to 2.5 by scheduling time to interview with Victor (during lunch, before school, or after school) and explain why you got each question wrong/how to get the right answer.

Plagiarism

To "plagiarize" means:
- to steal and pass off (the ideas or words of another) as one's own
- to use (another's production) without crediting the source
- to commit literary theft
- to present as new and original an idea or product derived from an existing source

In other words, plagiarism is an act of fraud. It involves both stealing someone else's work and lying about it afterward.

All of the following are considered plagiarism:
- Copying answers during a test
- Looking at your phone during a test
- Turning in homework where you have **copied answers without attempting the problems yourself**

Plagiarizing someone else's math work is especially troublesome as each topic builds on the other topic before it. If you do not take the time to learn something one day it will forever be a blind spot as we move on to more intricate and complicated problems.

Additionally, sometimes students make the mistake that they are working together. But let's be clear on what working together looks like compared to cheating:

Working together	Plagiarism
● Coming to a study session having privately looked over the work	● Coming to a study session to get answers without trying first on your own
● Explaining how things works	● Showing an answer without explanation
● Using problems you understand as a model	● Copying without trying to understand
● Asking each other questions	● Sending a photo of your homework and not talking about it
●	●
●	●

The consequence for Plagiarism is a 0 on the assignment. You will be allowed an opportunity to retake with a maximum score of a 2.

Accommodations

If you need any accommodations through an IEP or 504 I will be working with your learning specialists to help make sure you get those accommodations. Please talk to me about what works and what doesn't in whatever manner is most comfortable (in person, email, through your Learning Specialist) so that your needs are met.

If you need to miss school due to illness, a trip, or an unplanned emergency please let me know as soon as possible so that I can get you the material you need. All course material is available on mathvisionproject.org if you need to print/view anything at home or on the road.

4-Point Rubric

For all assignments I will be using an adapted 4-point grading scale.

Rubric Score	Rubric Description	Letter Grade Equivalent
4	More Complex/Perfect Completion	A+
3	**Target Learning Goal/Building Blocks**	**B**
2	Simpler Content/Some Errors (<u>or >2 but late</u>)	C
1	Partial success	D-
0.5	Knowledge shown but no success	F
0	Not turned in, plagiarised, blank	0

Half points awarded for in-between demonstrations of understanding.

In an ongoing process of preparing you for the rigors of college, late work will still be graded but cannot score higher than a 2 and will inform Pathways to College eligibility.

The Blog

I will often post videos of lessons and other supplemental material to the class blog. It is important to follow the blog. Be sure to subscribe (PARENTS TOO!)
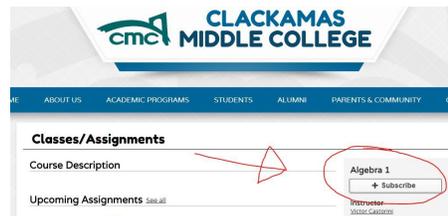
Gradebook

All of your CMC College Prep classes will have grades posted to Synergy. You can access Synergy through the school's website. Check your grades often and hold on to assignments that are passed back. Errors happen and it's easier to change a grade if you have your assignment than if you do not.

Formative Assessments (33.3%)

Homework Check:

  I will not scour over every single homework assignment but I will check to see that you are completing these as we go. Perfect practice makes perfect. Due when a quiz or test is given but I may check midweek to ensure you're keeping up on the daily routine.

Quizzes:

  Every week we will have a quiz to assess your understanding of the material thus far. These questions will be taken directly from your homework and classwork. This will occur on the last day we meet every week (usually Friday).
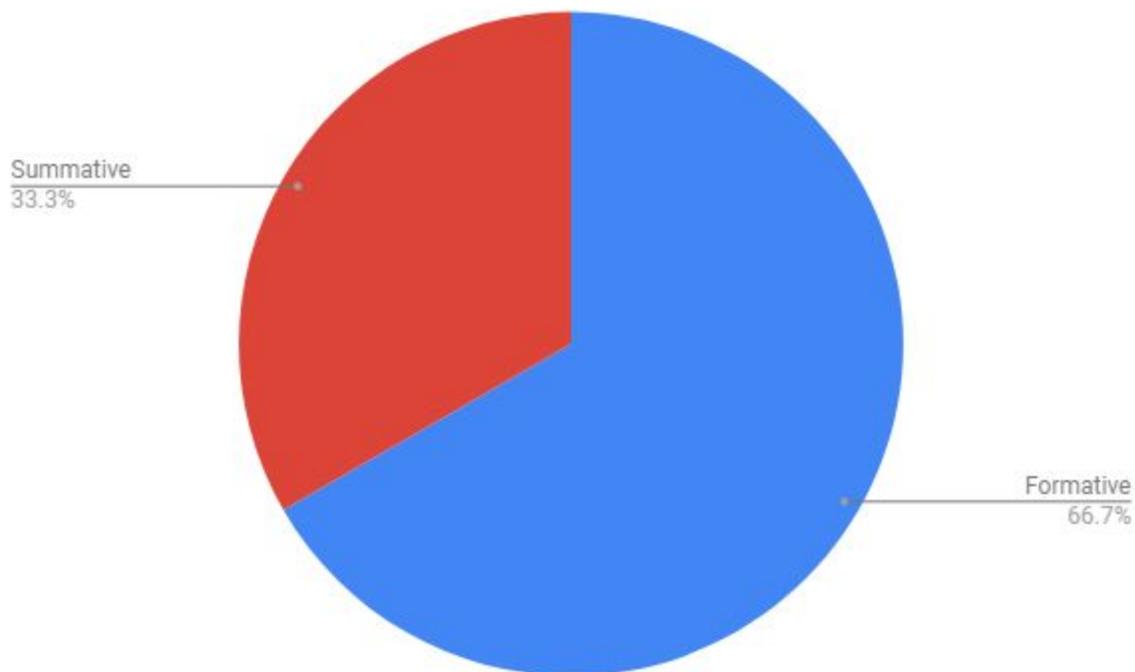
Illustrative Math:

Summative Assessments (66.7%)

Tests:

  There will be three Module Tests (unit tests). These will be weighted evenly.

Course Materials

We will be using the Math Vision Project's Secondary Algebra I curriculum with some supplemental material drawn from other courses and resources to meet the North Clackamas School District's higher standards.

All course material will be available online either through the Math Vision Project's website (mathematicsvisionproject.org) or on my blog (clackamasmiddlecollege.org). I **require** every student to **subscribe the the blog** and get updates.

Additionally I will produce some video content so that student have another resource for gaining information. **It is expected that you watch the corresponding YouTube Homework Helper every night**. These range from 5 to 15 minutes.

Because there is no traditional textbook, your notes are of extreme importance. We will be using organized notebooks and **it is expected that you have a separate notebook for this class.**

Why don't you just tell us how to do the problems?

In your previous mathematic classrooms you may have experienced teacher who show you a method for a problem and then give you many similar problems to prove that you understand. However, this is a very shallow, Level 1 form of understanding. Memorization should not be the goal. Problems we face in our life are never just like the ones we see on a quiz or test so I'm more interested in helping you develop the connections that will help you make sense of new problems so that you can actually **_do mathematics_**!
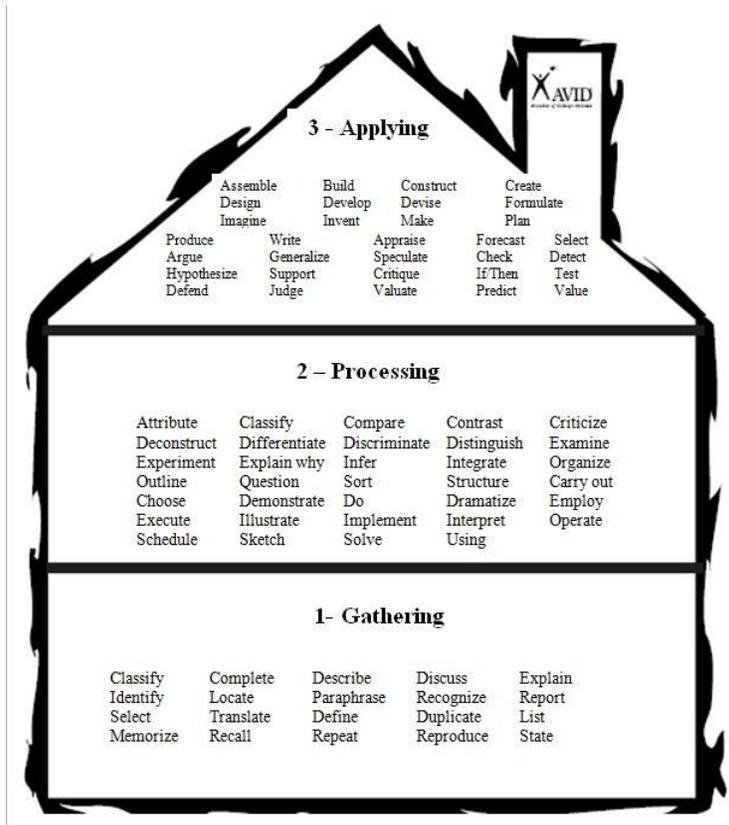
Algebra 1
Acknowledgement of Syllabus and Course Policies

I have read the syllabus and by signing this form show that I understand and agree to follow the expectations and requirements of the course. This includes policies pertaining to:

- Course Description
- Course Objectives
- Plagiarism
- Accommodations
- 4-Point Rubric
- Assessments (Formative and Summative)
- The Blog (I've subscribed ❏)
- Gradebook
- Course Material
- Why don't you just tell us how to do the problems?

Specifically answer the following:
- ❏ My student has access to the internet and will be able to watch the Homework Helper videos EVERY DAY
- ❏ We do not have steady internet access and will need support for the homework.

Student signature   _____

Student name printed _____

Parent Signature   _____

Questions or concerns? Please write below the best way to contact you:

> Question/Input:
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> Do you want me to contact you? Please tell me the best way: