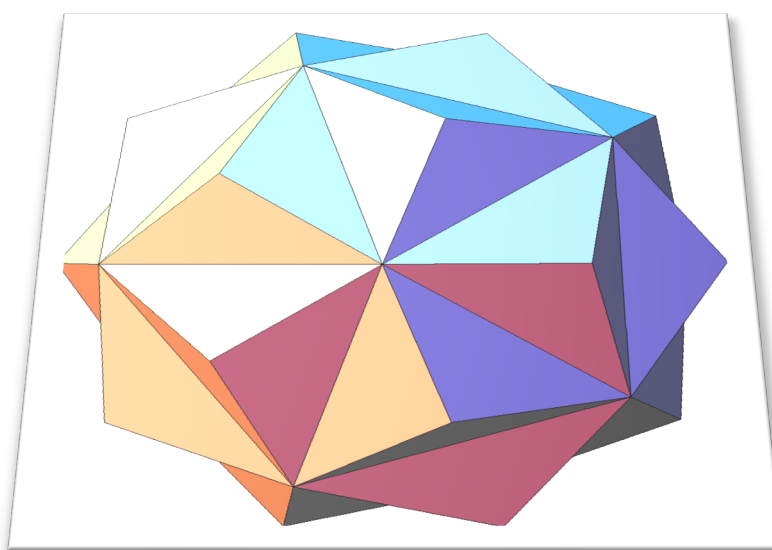


Course Outline

MATH 9/10



Required Materials:

- ❖ Math *only* 3 Ring Binder
- ❖ 3 hole punched lined paper
- ❖ 3 hole punched graphing paper
- ❖ Binder dividers for each unit (8)
- ❖ Pencil, eraser, blue or black pen, red pen, ruler, highlighters.
- ❖ Whiteboard dry erase markers
- ❖ Scientific Calculator
- ❖ 1 subject notebook (min 120 pages)

Course Topics:

- Unit 1: Rational Numbers (9)
- Unit 2: Banking & Budgeting (9) → Finance (10)
- Unit 3: Similarity & Scale (9) → Trigonometry (10)
- Unit 4: Powers, Exponents, & Square Roots (9)
→ Exponents and Radicals (10)
- Unit 5: Polynomials (9 & 10)
- Unit 6: Solving Linear Equations (9) → Graphs (10)
- Unit 7: Linear Relations (9) → Functions (10)
- Unit 8: Solving Systems of Linear Equations (10)

Policies & Expectations:

PUNCTUALITY: Please arrive before the bell so that you have time to prepare your materials for class.

ATTENDANCE: Missing a class puts you at risk of falling behind. We will cover important and challenging concepts each class, therefore, it is in your best interest to attend each class. Please inform me well in advance if you know you will not be able to attend a lesson. It is your responsibility to catch up on missed work if you are absent.

ILLNESS: DO NOT come to school if you experience any symptoms of illness. If you are experiencing any signs of illness, please inform me *right away*. This is for the health and safety of our class and everyone in our community.

CELLULAR DEVICES: Cell phones are to be turned off and always stored in your backpack during class, unless otherwise directed.

FOOD/DRINK: Food and drink are NOT permitted in the classroom. Water in a re-sealable container is acceptable.

ASSIGNMENTS: Assignments are to be submitted by the specified due date. Extensions on assignments will be provided on a case-by-case basis. You must talk to me at least 24 hours before the due date in order to be given an extension.

ASSESSMENTS: Please do not miss unit test days. This is an incredible inconvenience for me. Please inform me well in advance if you know that you will be unable to attend a test day.

CHEATING: No warnings. First offense will result in a phone call home and referral to the office.


COURSE CREDIT: You will learn both Math 9 and Math 10 concepts in this course. This is a very challenging task in one semester. If you feel that it is too difficult, you may opt to only receive a Math 9 credit. We will discuss details at a later date.

Assessment & Grading:

You will be graded according to course-specific standards using the proficiency scale indicated below.

To successfully pass the course your achievement must *surpass* an Emerging level.

Your final grade will be determined by the accumulation of learning that you demonstrate throughout the course. Class activities, assignments, quizzes, and tests will inform your proficiency level.

PROFICIENCY LEVEL 			
Emerging	Developing	Proficient	Extending
<ul style="list-style-type: none"> The student is beginning to demonstrate basic knowledge in relation to the learning standards Works with ongoing support 	<ul style="list-style-type: none"> The student demonstrates some knowledge in relation to the learning standards Works with some support 	<ul style="list-style-type: none"> The student demonstrates good knowledge in relation to the learning standards Works independently 	<ul style="list-style-type: none"> The student demonstrates knowledge beyond the learning standards Works independently and can support the learning of others
<ul style="list-style-type: none"> "I am just getting started." "I learn best with help." 	<ul style="list-style-type: none"> "I get some of it." "I am beginning to do more and more on my own." 	<ul style="list-style-type: none"> "I get it." "I can do it on my own." 	<ul style="list-style-type: none"> "I get it and go beyond what is expected of me." "I can teach it to a friend."

If you opt to receive a Math 9 credit only, you will be assessed according to Math 9 learning standards.

Curriculum:

BIG IDEAS: The curricular “Big Ideas” in mathematics outline the overarching themes that students will explore and conceptualize. Students should expect to understand the following:

- ❖ The principles and processes underlying operations with numbers apply equally to algebraic situations and can be described and analyzed (9)
- ❖ Computational fluency and flexibility with numbers extend to operations with rational numbers (9)
- ❖ Continuous linear relationships can be represented in many connected ways to identify regularities and make generalizations (9)
- ❖ Similar shapes have proportional relationships that can be described, measured, and compared (9)
- ❖ Analyzing the validity, reliability, and representation of data enables us to compare and interpret (9)
- ❖ Algebra allows us to generalize relationships through abstract thinking (10)
- ❖ The meanings of, and connections between, each operation extend to powers and polynomials (10)
- ❖ Constant rate of change is an essential attribute of linear relations and has meaning in different representations and contexts (10)
- ❖ Trigonometry involves using proportional reasoning to solve indirect measurement problems (10)
- ❖ Representing and analyzing situations allows us to notice and wonder about relationships (10)

CURRICULAR COMPETENCIES: The curricular competencies are integrated through classroom activities and assignments. They highlight what students are expected to do throughout the course.

Reasoning & Analyzing	Understanding & Solving
✓ Using logic and reasoning to analyze problems and draw conclusions	✓ Developing a variety of strategies to explain, clarify and justify mathematical understanding.
Communicating & Representing	Connecting & Reflecting
✓ Communicate in a variety of ways (concretely, pictorially, symbolically) to explain and clarify mathematical ideas	✓ Apply and connect mathematical concepts to other disciplines and to the real world.

CONTENT COMPETENCIES: The content competencies are what students are expected to know by the end of the course.

- ❖ Operations with rational numbers (addition, subtraction, multiplication, division, and order of operations)
- ❖ Exponents and exponent laws with whole number exponents
- ❖ Operations on powers with integral exponents
- ❖ Operations with polynomials, of degree less than or equal to 2
- ❖ Multiplication of polynomial expressions, polynomial factoring
- ❖ Spatial proportional reasoning.
- ❖ Statistics in society
- ❖ Financial literacy – best buys (e.g., coupons, proportions, unit price, products, and services)
- ❖ Financial literacy: gross and net pay
- ❖ Prime factorization
- ❖ Functions and relations: connecting data, graphs, and situations
- ❖ Linear functions: slope and equations of lines
- ❖ Two-variable linear relationships, using graphing interpolations, and extrapolation.
- ❖ Multistep one-variable linear equations.
- ❖ Systems of linear equations
- ❖ Arithmetic sequences
- ❖ Primary trigonometric ratios

Classroom Rules:

1. Treat others as you wish to be treated.
2. Be supportive by giving others your attention when they speak. Use your hand and wait your turn to speak.
3. Be encouraging of other students' thoughts, feelings, and ideas. Be inclusive of other students during group activities.
4. Use respectful language. Use English during class time.
5. Use constructive language when providing feedback or disagreeing with other peoples' opinions.
6. Work diligently on assignments and don't distract others when they are trying to focus on their work.
7. Come to class on time so that you don't disrupt the rest of the class.
8. Come to class prepared to participate in activities and be ready to contribute to discussions.
9. Hand in assignments on time.
10. Be respectful of your environment. Clean up after yourself.
11. Be accountable for your own learning. Ask for help when you need it.
12. Come to class with a positive attitude each day and be ready to step outside of your comfort zone.