



I. Key Message/Expectations

Welcome! I am pleased to be your teacher and hope you enjoy learning about math as the year progresses. I am here to help you but it is my expectation that you come to class prepared and with a positive attitude and intention to learn.

I believe that every student can excel in mathematics. It is very important that you are using class time effectively and practicing each topic. Be sure to ask questions to clarify concepts. Please make sure you set an appointment with me as soon as possible to ensure you get the help you need!

Every student has the right and ability to learn. Therefore, an effective classroom is a positive learning environment where all students and teachers are treated with respect.

Attendance is one of the most important factors for academic success! It is expected that you come to class every day on time with the materials you require for class. If an absence is pre-planned please inform your teacher as early as possible so that materials can be provided. If unplanned, please inform the teacher either by email (sinclairm@prsd.ab.ca) or when back in school.

II. Course Overview

The goal of the study of mathematics is for students to:

- Use mathematics confidently to solve problems
- Communicate and reason mathematically
- Appreciate and value mathematics
- Make connections between mathematics and its applications
- Commit themselves to lifelong learning
- Become mathematically literate adults, using mathematics to contribute to society.

As per the Alberta Grade Eight Mathematics Program of Studies, the following learning outcomes will be covered in this course:

Number

- Demonstrate an understanding of squares, square roots, percents, ratio and rate
- Demonstrate an understanding of multiplying and dividing fractions and integers

Patterns and Relations

- Use patterns to describe the world and to solve problems
- Represent algebraic expressions in multiple ways

Shape and Space

- Use direct and indirect measurement to solve problems
- Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them
- Describe and analyze position and motion of objects and shapes

Statistics and Probability

- Collect, display and analyze data to solve problems
- Use experimental or theoretical probabilities to represent and solve problems involving uncertainty

III. Scope and Sequence **timeline and course structure may change throughout the year**

Unit and Textbook Chapter	Outcome(s)	Topics Covered:	Approx. Start Dates: *
Grade 7 Review			August 30
Representing Data (1)	Statistics and Probability	- strengths and limitations of circle graphs, line graphs, bar graphs, and pictographs - misrepresentation of data	September 6
Integers (8)	Number	- products and quotients of integers - order of operations with integers	September 27
Ratios, Rates, and Proportional Reasoning (2)	Number	- two-term and three-term ratios - part-to-part and part-to-whole ratios - rates and unit rates	October 18
Squares and Square Roots (3)	Number	- finding squares and square roots of numbers - estimate square roots of whole numbers	November 8
Understanding Percent (4)	Number	- represent fractional percents and percents greater than 100% - convert between fractions, decimals, and percents - combined percents - percent of a percent	November 22
Review and Holiday Break			December 13
Pythagorean Relationship (3)	Number, Shape and Space	- right triangle determination - Pythagorean theorem exploration and applications	January 3
Fraction Operations (6)	Number	- mixed numbers and improper fractions - multiplying and dividing fractions - order of operations with fractions	January 24
Probability (11)	Statistics and Probability	- probability of independent events	February 14
Linear Relations (9)	Patterns and Relations	- table of values and graphs of linear relations	March 28
Solving Linear Equations (10)	Patterns and Relations	- solving linear equations - verifying solutions - distributive property	April 18
Surface Area (5)	Shape and Space	- nets of 3-D objects - top, front, and side views - surface area of right cylinders and prisms	May 2
Volume (7)	Shape and Space	- volume of right cylinders and prisms	May 23
Tessellations (12)	Shape and Space	- transformations	June 13
Review and Final Exam			June 20 (Final Exam Date TBA)

Final Course Evaluation	
Number	30%
Patterns and Relations	15%
Shape and Space	22.5%
Statistics and Probability	7.5%
Final Exam	25%

IV. Teaching Methodology

Students will be taught through a variety of different instructional methods and strategies including, but not limited to: direct teaching, cooperative learning, project-based learning, inquiry-based assignments, and technological means. Where appropriate, students may be allowed to use personal devices (see expectations in Student Handbook).

V. Assessment

There will be a number of small formative assignments and quizzes in class, as well as practice questions from the textbook. These assignments will not be taken for marks and are required to practice and develop the skills needed in each chapter and gain a deeper understanding of the course material. There will be several projects in this course. These projects are an opportunity for students to demonstrate a deep and meaningful understanding of the material.

Students should expect to be assessed for marks through the use of summative projects and unit tests. Assessment is based around the students' most recent demonstration of the course material. Opportunities for rewrites will be available. In the event a student does not hand-in an assignment, a NHI (not handed in) will be assigned on PowerSchool until it is and parents/guardians will be notified.

Students and parents are encouraged to use the school website and PowerSchool to keep informed of marks, attendance, etc. This site will be updated regularly to give an accurate representation of each student's achievement to date.

Course Breakdown:

- All Unit Assessments 75%
- Final Exam 25%

VI. Resources

- MathLinks 8 Textbook (provided by GPS)
- Pencils/Erasers
- Ruler
- Binder
- Calculator (not phone)
- Lined/Graph paper