Mathematics 9
Course Outline
Fairview High School
2022-2023

INSTRUCTOR: Miss K. Wyness, wynessk@prsd.ab.ca

RESOURCE: Math Links Nine, McGraw-Hill Rhyerson, 2008

COURSE OBJECTIVE:

The main goals of mathematics education are to prepare 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.

Students who have met these goals will:
- gain understanding and appreciation of the contributions of mathematics as a science, philosophy and art
- exhibit a positive attitude toward mathematics
- engage and persevere in mathematical tasks and projects
- contribute to mathematical discussions
- take risks in performing mathematical tasks
- exhibit curiosity

GENERAL EXPECTATIONS:
- **REGULAR ATTENDANCE** – Attendance is one of the most important factors for academic success. If an absence is unavoidable, it is YOUR responsibility to catch up on work that you missed. Please make arrangements with me or a classmate to obtain missed materials. If you miss a test due to an excused absence, you may write the test at lunch or in class on the first day back.
- **ARRIVE ON TIME** – When the bell goes, I expect you to be in your desk, with your books open and phone put away, ready to start class. If lateness is unavoidable, please enter the classroom with a minimum of disruption.
- **COME PREPARED** – Please bring books, pencils, calculators, etc. to class each day. All math is to be done in **pencil**. All handouts, quizzes, assignments, and exams are to be kept in order in a binder. These will assist you as a study guide.

- **ASSIGNMENTS** – All assignments are due at the beginning of class, on or before the due date. If you need extra time for an assignment please make arrangements with me prior to the due date.
- **WORK HABITS** – It is expected that students use class time to the best of their abilities for the whole period every class. While I am providing instruction, I expect you to be listening and **NOT** talking. You may of course raise your hand to ask questions or make comments. Mature, respectful behaviour is a necessity for all members of the class.

TEACHING METHODOLOGY:

Students will be taught through a variety of different instructional methods and strategies including, but not limited to: lecture, questions and answer discussion, small group work, independent learning, individual tutorials, use of manipulatives, and technological means including the use of a Smartboard, videos, online tools, and where appropriate personal owned devices.

ELECTRONIC DEVICES:
- Cell phones and other electronic devices may only be used at times indicated by the teacher. Please refrain from using them to make calls or text message during class time. If consistently used inappropriately, they will be placed in the main office.
- All electronic devices must be placed on the teacher's desk during quizzes and exams.

COURSE OUTLINE: *Dates are approximate*

UNIT	TOPIC (Chapter)	TIMELINE
1.	Rational Numbers (Ch 2)	Sept. 6 – Oct. 6

- compare and order rational numbers
- perform operations with positive and negative decimals and fractions
- identify and calculate square roots

2.	Powers and Exponents (Ch 3)	Oct. 11 – Nov. 4

- evaluate positive exponents
- apply the exponent laws
- evaluate equations with order of operations and exponent laws

3.	Operations with Polynomials (Ch 5 & 7)	Nov. 7 – Dec. 16

- identify the variables, degree, number of terms, and coefficients
- simplifying and solve equivalent expressions
- add, subtract, multiply and divide polynomials

4.   Geometry of Polygons (Ch 1 & 4)   Jan. 9 – Feb. 9

- determine surface area of 3D objects
- explain how polygons are similar
- solve problems using similar polygons
- draw and interpret scale diagrams of 2D shapes
- demonstrate an understanding of line and rotation symmetry

5.   Linear Relations (Ch 6 & 8)   Feb. 13 – Mar. 8

- write equations to represent linear relations
- graph linear equations
- solve equations

6.   Linear Inequalities (Ch 9)   Mar. 13 – Apr. 6

- write inequalities to represent real-world problems/situations
- solve one-step inequalities
- solve multi-step inequalities

7.   Circle Geometry (Ch 10)   Apr. 17 – May 11

- distinguish between central and inscribed angles
- identify the properties of chords
- identify the properties of tangents

8.   Data Analysis and Probability (Ch 11)   May 15 – June 2

- identify the effect of factors such as bias, use of language and ethics on data collection
- justify a selection of population or sample to answer a question
- develop and implement a plan for the collection, analysis, and display of data

Review   June 5 – June 16

Finals   June 19 – June 23

EVALUATION:

45%   Assignments/Quizzes

30%   Unit Exams

25%   Final Examination

Keep track of your marks as they will be posted online regularly. Regular attendance and consistent work habits are the key to your success in this course. Extra help is available at noon hour and after school and it is your responsibility to ask. IF you do your homework, review your work and study for quizzes/exams; you should be successful in Math 8! Your success depends on YOU! Have a great year and have fun!