CROCUS PLAINS REGIONAL SECONDARY SCHOOL
COURSE OUTLINE AND ASSESSMENT GUIDE

Course Name: GRADE 9 MATHMATICS (MAT10F) – 2025-2026

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Course Description:

- Grade 9 Mathematics (10F) is a foundation course to prepare students for multiple possible pathways in Grades 10 to 12. The course builds on the understandings from Kindergarten to Grade 8 Mathematics. This course continues with the four strands of mathematics; number, patterns and relations, shape and space and statistics and probability.
- The activities that take place in the Grade 9 mathematics classroom should stem from a problem-solving approach and be based on the seven mathematical processes. Students should develop an understanding of the nature of mathematics through specific knowledge, skills, and connections among and between strands.

Text/Other Resources: *Math Makes Sense 9, scientific calculator, ruler*

Units of Study

Unit Title	Learning Outcomes	Assessment Plan
Review of Grade 8 Material & Concepts	----------	*Formative Assessment* Assessment may include: Daily classroom activities *Summative Assessment* None, skills learned to be integrated into other outcomes
Square Roots & Surface Area	Determine the square root of positive rational numbers that are perfect squares. Determine the approximate square root of positive rational numbers that are non-perfect squares. Determine the surface area of composite 3-D objects to solve problems.	*Formative Assessment* Assessment may include: • Textbook Assignments • Mental Math • Quizzes • Math Journals • Conferencing • Group Discussions *Summative Assessment* Unit Tests/Quizzes/Projects
Powers & Exponent Laws	Demonstrate and understanding of powers with integral bases. Demonstrate an understanding of operations on powers with integral bases.	See above

Rational Numbers	Demonstrate an understanding of rational numbers. Explain and apply the order of operations, including exponents, with and without technology.	See above
Linear Relations	Generalize a pattern arising from a problem-solving context using linear equations and verify by substitution. Graph linear relations, analyze the graph, and interpolate or extrapolate to solve problems.	See above
Polynomials	Demonstrate an understanding of polynomials. Model, record, and explain the operations of addition, subtraction, multiplication, and division of polynomial expressions, concretely, pictorially, and symbolically.	See above
Linear Equations & Inequalities	Model and solve problems using linear equations. Explain and illustrate strategies to solve single variable linear inequalities with rational number coefficients within a problem-solving context.	See above
Similarities & Transformations	Demonstrate an understanding of similarity of polygons. Draw and interpret scale diagrams of 2-D shapes. Demonstrate an understanding of line and rotation symmetry.	See above
Circle Geometry	Solve problems and justify the solution strategy using circle properties.	See above
Probability & Statistics	Describe the effect of bias, use of language, ethics, cost, time and timing, privacy, cultural sensitivity on the collection of data. Select and defend the choice of using either a population or a sample of a population to answer a question. Develop and implement a project plan for the collection, display, and analysis of data. Demonstrate an understanding of the role of probability in society.	See above

Assessment Guidelines

There are various purposes for assessment:

- Assessment *for* learning **(formative assessment)**: where assessment helps teachers gain insight into what students understand in order to plan and guide instruction, and provide helpful feedback to students.

- Assessment *of* learning **(summative assessment)**: where assessment informs students, teachers and parents, as well as the broader educational community, of achievement at a certain point in time in order to celebrate success, plan interventions and support continued progress.

Academic Achievement

Grades will be calculated on summative assessment information only. The final calculation will be a fair reflection of a student's achievement of the learning outcomes.

Term Work 85%

- **Projects & Quizzes 40%**
- **Chapter Tests 45%**

Final Assessment 15%

- **Final Exam 15%**

Learning Behaviours

Assessment and reporting of learning behaviors will be according to the Brandon School Division Learning Behaviors Rubric.