

Mathematics 9 Course Outline

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CORE COMPETENCIES



Core competencies are sets of intellectual, personal, and social and emotional proficiencies that all students need to develop in order to engage in life-long learning.

Routines that will occur in the classroom are designed for students to:

- Connect and collaborate with peers and the teacher
- Think critically and creatively about problems and tasks
- Reflect on learning journey and set future goals

COMMUNICATION BETWEEN SCHOOL AND HOME

I will regularly email math updates to all students and parents with quiz dates, assignments, and any other important information. Please update your email address at the office if it has changed and send any questions/concerns by email (placewicz_s@surreyschools.ca) or on TEAMS chat.

SUPPLIES

Pencils, pens, eraser, ruler, sharpener, some crayons/highlighters/pens, lined and graph paper, calculator**

**Most work in math 9 will be done without a calculator. If purchasing a new calculator, consider a scientific calculator with a 2 line display since that will work best for future math courses. Students will have access to a multiplication table.

MATH 9 TOPICS & ASSESSMENT

Topics

Topic 1: Operations with Fractions, Order of Operations

Topic 2: Fractions and Decimals, Square and Cube Roots, Problem Solving

Topic 3: Evaluating Powers and Order of Operations

Topic 4: Exponent Laws $a^m \times a^n$, $a^m \div a^n$, $(a^m)^n$, $(a \times b)^m$, $(\frac{a}{b})^m$

Topic 5: Polynomial Introduction and Vocabulary

Topic 6: Operations with Polynomials: $+$, $-$, \times , \div

Topic 7: Solving Equations(I): 2-Step Equations, equations with a variable on both sides

Topic 8: Solving Equations(II): equations with brackets/fractions, problem solving

Topic 9: Graphing Linear Relations: $y = mx + b$, vertical and horizontal lines, slope

Topic 10: Creating and Interpreting Graphs, Statistics

Additional Topics

Proportional Reasoning: scale diagrams, unit conversions

Financial Literacy: Banking and Budgeting






Assessment

Students will be assessed by their work on quizzes and assignments, as well as through ongoing classroom observations and conversations. To help develop a growth mindset, students will have opportunities to learn from their mistakes and improve throughout the semester.



- Topics 1-10 will be assessed through quizzes that repeat multiple times.
- Assignments: Assigned throughout the semester covering a variety of topics and curricular competencies. Students will have time in class as well as 2-3 weeks to complete each assignment; therefore, all assignments should be completed on time.
- All assessments (quizzes and assignments) will be returned to students and all scores will be recorded on an Assessments Page included in this outline.
- Each assignment and quiz will get a score of 1, 2, 3, 4, or 5 (this is approximately equivalent to 1,2=emerging, 3=developing, 4=proficient, and 5=extending).
- Only the highest quiz score will be counted. For example, if you scored 3 on topic 1 and then scored 2 the following week, you will keep your score of 3.
- Students who have an average of 4 or higher on quizzes and assignments get an 'A'.
- Students who have an average of 3-4 on quizzes and assignments get a 'B'.
- Students who have an average of 2-3 on quizzes and assignments get a 'C', with C- and C+ to students who are at the ends of these ranges.
- Our final exam will be a final opportunity to show improvement on any of the 10 topic quizzes. In addition, there will be 2 new problems that students can work through to improve assignment marks.

Proficiency Level Rubric used for Assessment:

PROFICIENCY LEVEL 			
Emerging 	Developing 	Proficient 	Extending 
<i>The student demonstrates an initial understanding of the concepts and competencies relevant to the expected learning.</i>	<i>The student demonstrates a partial understanding of the concepts and competencies relevant to the expected learning.</i>	<i>The student demonstrates a complete understanding of the concepts and competencies relevant to the expected learning.</i>	<i>The student demonstrates a sophisticated understanding of the concepts and competencies relevant to the expected learning.</i>
<i>Works with ongoing support.</i>	<i>Works with some support.</i>	<i>Works independently.</i>	<i>Works independently and can support the learning of others.</i>
<i>"I am just getting started."</i>	<i>"I get some of it."</i>	<i>"I get it!"</i>	<i>"I get it and go beyond what is expected of me."</i>
<i>"I learn best with help."</i>	<i>"I am beginning to do more and more on my own."</i>	<i>"I can do it on my own."</i>	<i>"I can teach it to a friend."</i>

To Succeed in Math 9, I will:

1. Be patient! Learning mathematics takes patience and time. Go back to something that was difficult to learn and you might find that after a few days it is easier to understand.
2. Get enough sleep. Your brain processes and sorts the information you learn throughout the day while you are sleeping.
3. Ask for help in class/at lunch. Watch math videos to preview or review topics (ex. Khan academy).
4. Do math homework every day (worksheet questions, write/rewrite notes, watch videos, explain math concepts, work on problem solving, etc.)
5. Focus during the lesson and during class work time. If you need a break: take some breaths, try a class puzzle, connect with a classmate/teacher, etc.
6. Learn from mistakes. Mistakes are an opportunity to advance your learning. If you make a mistake, you now know what you didn't know and can go back to that topic to understand it better.
- 7.
- 8.
- 9.
- 10.

Math 9 Assessment Record

Name:

Topics

Score (shade in)

Topic 1: Operations with Fractions, Order of Operations					
Topic 2: Fractions and Decimals, Square and Cube Roots, Problem Solving					
Topic 3: Evaluating Powers and Order of Operations					
Topic 4: Exponent Laws $a^m \times a^n$, $a^m \div a^n$, $(a^m)^n$, $(a \times b)^m$, $(\frac{a}{b})^m$					
Topic 5: Polynomial Introduction and Vocabulary					
Topic 6: Operations with Polynomials: $+$, $-$, \times , \div					
Topic 7: Solving Equations(I): 2-Step Equations, equations with a variable on both sides					
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Topic 9: Graphing Linear Relations: $y = mx + b$, vertical and horizontal lines, slope					
Topic 10: Creating and Interpreting Graphs, Statistics					

Assignments:

Assignment 1:					
Assignment 2:					
Assignment 3:					
Assignment 4:					
Assignment 5:					
Assignment 6:					
Assignment 7:					
Assignment 8:					
Assignment 9:					
Assignment 10:					