

DATE: *Tuesday September 5, 2017*SECONDARY SCHOOL: *Brebeuf College School*DEPARTMENT HEAD: *Brad Ryan*TEACHER: *Brad Ryan*DEPARTMENT: *Mathematics*

Curriculum Policy Document			
COURSE TITLE	Foundations of Mathematics 9	COURSE CODE	MFM 1P
PRE-REQUISITE	Grade 8	GRADE & TYPE	9
FULL YEAR/ SEMESTER	Semester	CREDIT VALUE	1

COURSE DESCRIPTION (AS SPECIFIED IN MINISTRY OF EDUCATION POLICY DOCUMENT)

This course enables students to develop an understanding of mathematical concepts related to introductory algebra, proportional reasoning, and measurement and geometry through investigation, the effective use of technology, and hands-on activities. Students will investigate real-life examples to develop various representations of linear relations, and will determine the connections between the representations. They will also explore certain relationships that emerge from the measurement of three-dimensional figures and two-dimensional shapes. Students will consolidate their mathematical skills as they solve problems and communicate their thinking.

Units of Instruction

Strand / Unit Titles	CLASSES	OVERALL EXPECTATIONS / UNIT DESCRIPTION
Number Sense and Algebra	20	<p>In this strand, students will solve problems involving proportional reasoning, that is: ratios, rates, and directly proportional relationships. They will be dealing with problems requiring the expression of percents, fractions, and decimals in their equivalent forms.</p> <p>Students will also simplify numerical and polynomial expressions in one variable, and solve simple first-degree equations. These numerical expressions involve Integers, rational numbers, exponents, adding and subtracting polynomials as well as multiplying a polynomial by a monomial</p>

Linear Relations	40	<p>In this strand, students will apply data-management techniques to investigate relationships between two variables; for example, interpret the meanings of points on scatter plots or graphs that represent linear relations, including scatter plots or graphs in more than one quadrant.</p> <p>Students will also determine the characteristics of linear relations by constructing tables of values, graphs, scatter plots, and lines or curves of best fit.</p> <p>They will also be required to demonstrate an understanding of constant rate of change and its connection to linear relations; that is, the connection between rate of change and slope. As well, they will compare the properties of direct variation and partial variation in applications.</p> <p>Students will be asked to make connections between various representations of a linear relation such as a table of values, an equation and a graph of the relation, and to solve problems using the representations. They will determine graphically the point of intersection of two linear relations, and interpret the intersection point in the context of an application.</p>
Measurement and Geometry	20	<p>In this strand, students will solve problems involving the areas and perimeters of composite two-dimensional shapes. Some of these problems are solved using the Pythagorean theorem, as required in applications.</p> <p>Problems involving the volumes of prisms, pyramids, cylinders, cones, and spheres will also be reviewed.</p> <p>Special emphasis will be on solving problems that require maximizing the area of a rectangle for a fixed perimeter or minimizing the perimeter of a rectangle for a fixed area.</p> <p>Geometric relationships of angle will be studied: such as: the properties of the interior and exterior angles of triangles, quadrilaterals, and other polygons, and the relationships of the angles formed by parallel lines cut by a transversal.</p>

STUDENT EVALUATION CRITERIA							
TERM – 70%		FINAL – 30%		FINAL REPORT CARD - 100%			
10 ≤ RELATIVE EMPHASIS / WEIGHTING ≤ 40		RELATIVE EMPHASIS / WEIGHTING		TERM TOTAL + FINAL TOTAL = REPORT CARD MARK			
KNOWLEDGE/UNDERSTANDING	22.5	E.Q.A.O.	10				
INQUIRY/THINKING	15	Final Exam	20				
COMMUNICATION	10						
APPLICATION	22.5						
TERM TOTAL		70	FINAL TOTAL		30		

ASSESSMENT FORMAT USED					
WRITTEN		PERFORMANCE		OTHER	
e.g. Multiple Choice	X	e.g. Manipulative Skills	X	e.g. Teacher Observation	X
Short Answer	X	Investigations	X	Interviews	
Open/Free Response	X	Projects	X	Skills Checklist	
Papers/Reports	X	Presentations	X		
		Programming			
		Problem Solving	X		

Policies & Procedures (Examples provided)	
Plagiarism / Cheating	See School Agenda Page 15 “School Code of Behaviour”
Internet Policies	Acceptable Use Policy A.29 of the T.C.D.S.B. at http://www.tcdsb.org
Classroom Policies	<ul style="list-style-type: none"> - Arrive on time prepared to learn. - Stay on task during class activities. - No food or drink allowed in the classroom. - Students are expected to be in proper uniform at all times. - No portable music devices or cell phones to be used in class.
Absences	Students are responsible to contact a fellow classmate or the teacher to receive any missed work due to absence.
Teacher Contacts	Parents are encouraged to contact the teacher if any concerns arise at brad.ryan@tcdsb.org or call the school for an appointment.
Extra Help	Extra help is provided in the morning before school (8:00 – 8:35) and after school (After 2:50 pm)
Late Assignments	Assignments shall be accepted up until the day that they are returned by the teacher, and may be subject to administrative consequences for lateness.

Resources (Examples provided)	
Textbook	<i>Applied Mathematics 9 (Nelson)</i> by: Melissa Baker
Student Materials	Notebooks, Pens, Pencils, Ruler, Calculator
Computer Use	Lab: Available for booking. Software: Microsoft Office 2010 , Geometer’s Sketchpad
Course Related Websites	http://www.MrRyan.com

Student:	OEN:	Grade:	Homeroom:
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Learning Skills and Work Habits		E – Excellent G – Good S – Satisfactory N – Needs Improvement	
Responsibility	<ul style="list-style-type: none"> Fulfills responsibilities and commitments within the learning environment. Completes and submits class work, homework, and assignments according to agreed-upon timelines. Takes responsibility for and manages own behaviour. 	Organization	<ul style="list-style-type: none"> Devises and follows a plan and process for completing work and tasks. Establishes priorities and manages time to complete tasks and achieve goals. Identifies, gathers, evaluates, and uses information, technology, and resources to complete tasks.
Independent Work	<ul style="list-style-type: none"> Independently monitors, assesses, and revises plans to complete tasks and meet goals. Uses class time appropriately to complete tasks. Follows instructions with minimal supervision. 	Collaboration	<ul style="list-style-type: none"> Accepts various roles and an equitable share of work in a group. Responds positively to the ideas, opinions, values, and traditions of others. Builds healthy peer-to-peer relationships through personal and media-assisted interactions. Works with others to resolve conflicts and build consensus to achieve group goals. Shares information, resources, and expertise, and promotes critical thinking to solve problems and make decisions.
Initiative	<ul style="list-style-type: none"> Looks for and acts on new ideas and opportunities for learning. Demonstrates the capacity for innovation and a willingness to take risks. Demonstrates curiosity and interest in learning. Approaches new tasks with a positive attitude. Recognizes and advocates appropriately for the rights of self and others. 	Self-Regulation	<ul style="list-style-type: none"> Sets own individual goals and monitors progress towards achieving them. Seeks clarification or assistance when needed. Assesses and reflects critically on own strengths, needs, and interests. Identifies learning opportunities, choices, and strategies to meet personal needs and achieve goals. Perseveres and makes an effort when responding to challenges.

Percentage Mark	Achievement of the Provincial Curriculum Expectations
80–100	The student has demonstrated the required knowledge and skills with a high degree of effectiveness. Achievement surpasses the provincial standard. (Level 4)
70–79	The student has demonstrated the required knowledge and skills with considerable effectiveness. Achievement meets the provincial standard. (Level 3)
60–69	The student has demonstrated the required knowledge and skills with some effectiveness. Achievement approaches the provincial standard. (Level 2)
50–59	The student has demonstrated the required knowledge and skills with limited effectiveness. Achievement falls much below the provincial standard. (Level 1)
Below 50	The student has not demonstrated the required knowledge and skills. Extensive remediation is required.
I	Insufficient evidence to assign a percentage mark (for Grade 9 and 10 courses only)
W	The student has withdrawn from the course.
ESL/ELD – Achievement is based on expectations modified from the curriculum expectations for the course to support English language learning needs.	
IEP – Individual Education Plan	
FRENCH – The student receives instruction in French for the course.	
SHSM – Specialist High Skills Major (for Grade 11 and 12 courses only)	
Course Median – The median is the percentage mark at which 50 per cent of the students in the course have a higher percentage mark and 50 per cent of the students have a lower percentage mark.	

NOTE: The above chart is a reformatting of the skills identified in the Ministry of Education's *Growing Success Document 2010*.