SEPTEMBER 2025 - FALL

HIGH SCHOOL MATHEMATICS COURSES

ROOTS TO ROUTES ACADEMY

KORINA THOMAS – REYNOLDS iBA, BEd, MEd

CO-FOUNDER | DIRECTOR OF OPERATIONS

(365) 358-3662 • www.rootstoroutes.ca • info@rootstoroutes.ca

LinkedIn | York's Top 30 Under 30 Recipient

OUR STORY

KORINA THOMAS-REYNOLDS
CO-FOUNDER

Growing up in Scarborough, I was fortunate to be exposed to diverse cultures from around the world. Due to my family's limited financial resources, traveling was not something we could afford. However, the friendships I formed in Scarborough provided me with countless cultural experiences that made me feel like I had traveled extensively. These experiences inspired me to pursue a career as a French and Mathematics educator, recognizing the importance of firsthand exposure to French culture in order to teach effectively.

As a high school mathematics teacher, I noticed that some of my Black students were struggling academically compared to their peers. Although I provided them with individual support and words of encouragement to boost their confidence, they still remained disengaged.

I realized that the curriculum failed to reflect their lived experiences, creating a sense of exclusion that hindered their academic progress. I personally experienced this feeling of not belonging during my university years, constantly searching for someone who resembled me in large lecture halls to ease my anxiety.

Determined to bring about lasting change, I delved into the field of ethnomathematics, which explores the relationship between culture and mathematics. By connecting the course content to my students' lives, I witnessed a significant shift in their attitudes towards math, fostering a newfound appreciation for the subject.

I firmly believe that every child deserves an educational experience that recognizes, respects, and validates their unique identity. This belief motivated the establishment of Roots to Routes Academy, where we prioritize teaching students about their own culture, the world, and themselves across all subjects. We understand that a single course can alter the course of a child's life, empowering them to unlock their true potential and explore a limitless world of possibilities.

ABOUT US

Roots to Routes Academy is an independent school offering high school credit courses year-round, designed to affirm and uplift students of colour. While remaining enrolled in their home school, students join us on a transformative learning journey that centres belonging, identity, and excellence. Our programs feature a global and Africentric curriculum that nurtures confidence, celebrates cultural heritage, and empowers students to explore their roots while discovering their voice and place in the world.

OUR MISSION

Our mission is to (re)ignite the mathematical curiosity of racialized students by creating a learning environment where they feel affirmed, supported, and empowered. Through culturally relevant pedagogy and a deep integration of diverse histories and perspectives, we strive to help students embrace mathematics, excel academically, and realize their full potential in a space where they truly belong.

OUR VISION

Our vision is to expand culturally relevant education by offering academic courses and experiential learning opportunities that affirm the identities of racialized students and foster a strong sense of belonging. Rooted in Africentric principles and inclusive of diverse global perspectives, we aim to build sustainable, transformative programs that empower students to connect with their heritage, thrive academically, and become impactful changemakers in a global society.
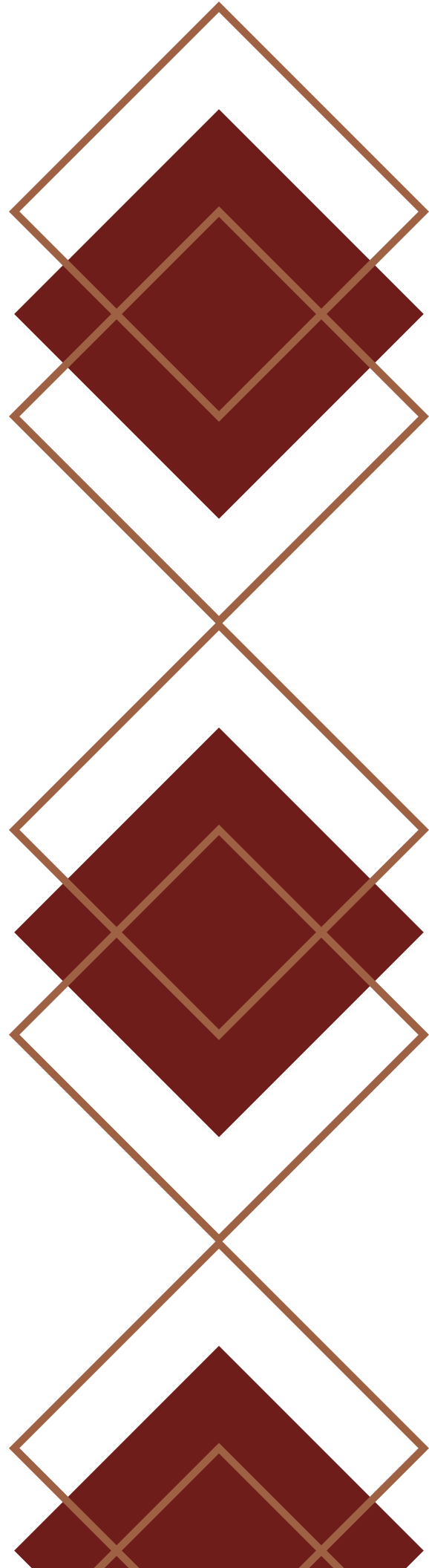
REQUIREMENTS & EXPECTATIONS

REQUIREMENTS

✓ A copy of a **Credit Counselling Summary** for high school students

For more information regarding course prerequisites, click [here](#).

✓ A copy of a report card that shows their most recent math grade

✓ Access to a laptop and/or a Chromebook

✓ Access to an iPad and/or tablet

✓ A copy of a Individual Education Plan (IEP) (if applicable)

✓ Reducing lates and absences to ensure that your child completes the **110 hours** needed for the course

EXPECTATIONS

✓ Cameras are turned on at **all times** during virtual classes.

✓ Check Google Classroom regularly for announcements and updates.

✓ Monitor your child's grades and progress in the course.

✓ Ensure that all homework and assignments are completed on time.

✓ Set aside daily dedicated time for your child to focus on math homework and studies.

✓ Maintain open communication with the teacher regarding your child's progress.

MATH IN MOTION

INTRODUCTION

MTH1W was de-streamed in September 2021 to ensure that all students have equitable access to mathematics as a pathway to future opportunities. At Roots to Routes Academy, our in-person classes create a learning space where racialized students feel seen, supported, and empowered to succeed. Through a culturally responsive approach, students will explore mathematical concepts in ways that reflect the contributions of African and global cultural communities. By centring identity, relevance, and real-world connections, students will begin to see mathematics as a subject—and a space—in which they truly belong.

This course is open to Grade 8 students entering high school in Fall 2025.

ETHNOMATHEMATICS

Our course is grounded in the principles of ethnomathematics—the study of the relationship between culture and mathematics—as a way to address systemic gaps in math literacy among students from underrepresented communities. By exploring mathematical ideas, contributions, and problem-solving strategies from African and global cultural traditions, students develop a deeper appreciation for the subject and their place within it. Research shows that ethnomathematics supports a strong sense of identity and belonging, empowering students to see themselves as capable, confident learners of mathematics.

UNITS OF STUDY

01

NUMBERS

02

ALGEBRA

03

DATA

04

GEOMETRY & MEASUREMENT

05

FINANCIAL LITERACY

GRADE 9 MATH SCHEDULE

IMPORTANT DATES

COURSE SCHEDULE	Tuesdays & Thursdays 6:00 PM to 9:00 PM - ONLINE
START DATE	Tuesday, September 9, 2025
COURSE WITHDRAWL DATE	Tuesday, September 23, 2025
PARENT/TEACHER INTERVIEWS	Tuesday, November 11, 2025
MID-TERM	Tuesday, November 4, 2025
WINTER BREAK	Monday, December 22, 2025 - Friday, January 2, 2026
COURSE CULMINATINGS/EXAMS	Tuesday, February 3, 2026
END DATE	Thursday, February 5, 2026

MATH IN ACTION

INTRODUCTION

MPM2D is an academic Grade 10 mathematics course that serves as a key stepping stone for students pursuing university-level math in senior grades. While this course remains streamed, it is a critical opportunity for students to build the foundational skills needed for advanced pathways. At Roots to Routes Academy, our engaging virtual classes make math meaningful by connecting abstract concepts to real-world interests—like using equations to analyze movement and strategy in students' favourite sports. This approach makes learning both dynamic and relatable, while helping students from underrepresented communities see themselves reflected and empowered in the world of mathematics.

This course is open to Grade 9 students entering Grade 10 in Fall 2025.

MATH IN ACTION

Our course is centred around the connecting principles of mathematics and sports. Students will be able to understand how quadratic equations relate to sports from basketball to soccer! Sports can provide students the ability to deepen their understanding of equations, connecting their passion with a subject that can open up their future to endless possibilities. By linking real-world examples to mathematical theory, students will see how abstract concepts have practical applications in areas they care about.

UNITS OF STUDY

01

ANALYTIC GEOMETRY

02

QUADRATIC RELATIONS

03

TRIGONOMETRY

GRADE 10 MATH SCHEDULE

IMPORTANT DATES

COURSE SCHEDULE	Mondays & Wednesdays 6:00 PM to 9:00 PM - ONLINE
START DATE	Monday, September 8, 2025
COURSE WITHDRAWL DATE	Monday, September 22, 2025
PARENT/TEACHER INTERVIEWS	Monday, November 10, 2025
MID-TERM	Wednesday, November 5, 2025
WINTER BREAK	Monday, December 22, 2025 - Friday, January 2, 2026
COURSE CULMINATINGS/EXAMS	Monday, February 2, 2026
END DATE	Wednesday, February 4, 2026

MATH IN TRANSITION

INTRODUCTION

This course introduces students to the mathematical concept of functions by building on their understanding of linear and quadratic relationships. Students will explore the characteristics of both discrete and continuous functions—including trigonometric and exponential—through numerical, algebraic, and graphical representations. Rooted in culturally responsive teaching, this course supports racialized students in seeing the relevance of mathematics in their own lives and communities. Students will apply functions to meaningful real-world contexts, strengthen their problem-solving skills, and develop confidence as mathematical thinkers. By encouraging students to articulate their reasoning and engage with complex, multi-step problems, the course fosters a deeper sense of belonging and academic empowerment.

MATH IN TRANSITION

Our course is designed to help students build a strong foundation for achieving their post-secondary goals while fostering a deep sense of belonging in the mathematics classroom. Through purposeful and engaging learning experiences, students strengthen their skills and grow in confidence as capable math learners. Our program integrates diverse cultural perspectives—centering Black excellence and global contributions—to affirm that mathematics is not only accessible, but deeply connected to students' identities and lived experiences. With a supportive community of educators, students are empowered to see themselves in mathematics and are encouraged to pursue future studies and careers with confidence and purpose.

UNITS OF STUDY

01

CHARACTERISTICS OF FUNCTIONS

02

EXPONENTIAL FUNCTIONS

03

DISCRETE FUNCTIONS

04

TRIGONOMETRIC FUNCTIONS

GRADE 11 MATH SCHEDULE

IMPORTANT DATES

COURSE SCHEDULE	Tuesdays & Thursdays 6:00 PM to 9:00 PM - ONLINE
START DATE	Tuesday, September 9, 2025
COURSE WITHDRAWL DATE	Tuesday, September 23, 2025
PARENT/TEACHER INTERVIEWS	Tuesday, November 11, 2025
MID-TERM	Tuesday, November 4, 2025
WINTER BREAK	Monday, December 22, 2025 - Friday, January 2, 2026
COURSE CULMINATINGS/EXAMS	Tuesday, February 3, 2026
END DATE	Thursday, February 5, 2026

ADVANCED FUNCTIONS

INTRODUCTION

This course extends students' experience with functions by exploring the properties of polynomial, rational, logarithmic, and trigonometric functions. Building on their prior knowledge, students will develop techniques for combining functions and deepen their understanding of rates of change. They will represent these functions using numerical, algebraic, and graphical methods, solving problems that connect mathematical theory to real-world applications. Students will refine their use of mathematical processes, enhance their reasoning skills, and articulate their problem-solving strategies when tackling complex, multi-step problems. It is *strongly* recommended for students interested in entering mathematics intensive programs email info@rootstoroutes.ca prior to enrolling.

ADVANCED FUNCTIONS

Our program is dedicated to empowering students of colour by offering a transformative educational experience designed to affirm their identities and cultural heritage. Through culturally responsive teaching, we integrate histories, cultures, and perspectives from Black and other diverse communities into every aspect of learning. Guided by skilled educators who prioritize representation and inclusivity, students develop a strong sense of belonging and pride. We focus on fostering academic excellence and personal growth, empowering students to confidently pursue STEM careers at the university level and beyond.

UNITS OF STUDY

01

CHARACTERISTICS OF FUNCTIONS

02

EXPONENTIAL FUNCTIONS

03

DISCRETE FUNCTIONS

04

TRIGONOMETRIC FUNCTIONS

ADVANCE FUNCTIONS SCHEDULE

IMPORTANT DATES

COURSE SCHEDULE	Mondays & Wednesdays 6:00 PM to 9:00 PM - ONLINE
START DATE	Monday, September 8, 2025
COURSE WITHDRAWL DATE	Monday, September 22, 2025
PARENT/TEACHER INTERVIEWS	Monday, November 10, 2025
MID-TERM	Wednesday, November 5, 2025
WINTER BREAK	Monday, December 22, 2025 - Friday, January 2, 2026
COURSE CULMINATINGS/EXAMS	Monday, February 2, 2026
END DATE	Wednesday, February 4, 2026

CALCULUS & VECTORS

INTRODUCTION

This calculus course builds on students' foundational knowledge of functions and rates of change to explore advanced concepts such as limits, derivatives, and integrals. Students will develop techniques to analyze and interpret the behavior of functions both algebraically and graphically, connecting these concepts to real-world problems and applications. Emphasizing critical thinking and problem-solving, the course encourages students to refine their mathematical reasoning and clearly communicate complex multi-step solutions. Designed to prepare students for university-level STEM programs, this course fosters confidence and a sense of belonging through culturally relevant teaching approaches. Students interested in math-intensive pathways are encouraged to email info@rootstoroutes.ca prior to enrolling.

CALCULUS & VECTORS

Dedicated to empowering students of colour through a transformative learning experience focused on Calculus and Vectors, designed to affirm their identities and cultural heritage. Through culturally responsive teaching, we weave histories, cultures, and perspectives from Black and other diverse communities into every aspect of the curriculum. Guided by skilled educators who prioritize representation and inclusivity, students build a strong sense of belonging and pride while mastering advanced mathematical concepts. We emphasize academic excellence and personal growth, empowering students to confidently pursue STEM careers at the university level and beyond.

UNITS OF STUDY

01
ALGEBRAIC VECTORS

02
EQUATIONS OF LINES AND PLANES

03
APPLICATIONS OF DERIVATIVES

04
CURVE SKETCHING

CALCULUS & VECTORS SCHEDULE

IMPORTANT DATES

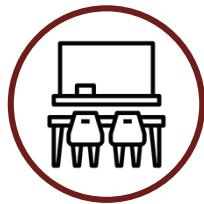|	
COURSE SCHEDULE	Tuesdays & Thursdays 6:00 PM to 9:00 PM - ONLINE
START DATE	Tuesday, September 9, 2025
COURSE WITHDRAWL DATE	Tuesday, September 23, 2025
PARENT/TEACHER INTERVIEWS	Tuesday, November 11, 2025
MID-TERM	Tuesday, November 4, 2025
WINTER BREAK	Monday, December 22, 2025 - Friday, January 2, 2026
COURSE CULMINATINGS/EXAMS	Tuesday, February 3, 2026
END DATE	Thursday, February 5, 2026

PROGRAM ADVANTAGES

DID YOU KNOW...?

- In 2018, EQAO data for Ontario's largest school board revealed that 57% of TDSB students overall met the provincial standard for Grade 9 math, while only 18% of Black students achieved the same standard.
- A study conducted in the United States revealed that Black students who have the opportunity to be taught by at least one Black teacher by the third grade exhibit a 13% higher likelihood of enrolling in university.
- According to school-board data, certain school boards in Ontario have less than 2% of their staff population comprised of Black teachers, indicating a significant shortage.

OUR SOLUTIONS

AFRICENTRIC/ GLOBAL CULTURAL CURRICULUM

SMALL CLASSROOM SIZES

RACILIZED EDUCATORS

TEST PREPATION

AFRICENTRIC AND GLOBAL CULTURAL SOCIAL-EMOTIONAL LEARNING (SEL)

ACCESS MATH
FOR THE CULTURE

CONTACT US

(365) 358-3662

www.rootstoroutes.ca

info@rootstoroutes.ca

BSID #: 665779

Instagram · Facebook · Tik Tok · Spotify