

FEBRUARY 2025 - SPRING

HIGH SCHOOL MATHEMATICS COURSES

ROOTS TO ROUTES ACADEMY

KORINA THOMAS - REYNOLDS iBA, BEd, MEd

CO-FOUNDER | DIRECTOR OF OPERATIONS

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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 who offers high school credit courses over the throughout the year. We offer a learning environment built **for** the Black community, **by** the Black community. Students will remain fully enrolled in their home school as they embark on an exciting journey with us! Our programs prioritize a global and Africentric curriculum tailored to increase student confidence. Students will access a course where they will flourish as they learn more about their cultural roots to discover their place in the world.

OUR MISSION

Our mission is to (re)ignite Black students' interests in mathematics by incorporating their own rich cultural history into the learning process, empowering them to embrace the subject, achieve academic excellence, and unlock their limitless potential.

OUR VISION

Our vision is to expand Africentric education by offering culturally relevant academic courses and experiential learning opportunities that empower students to connect deeply with their cultural roots. Through sustainable solutions, we aim to build course programs that prepare students to become impactful changemakers in a global society.

REQUIREMENTS & EXPECTATIONS

REQUIREMENTS

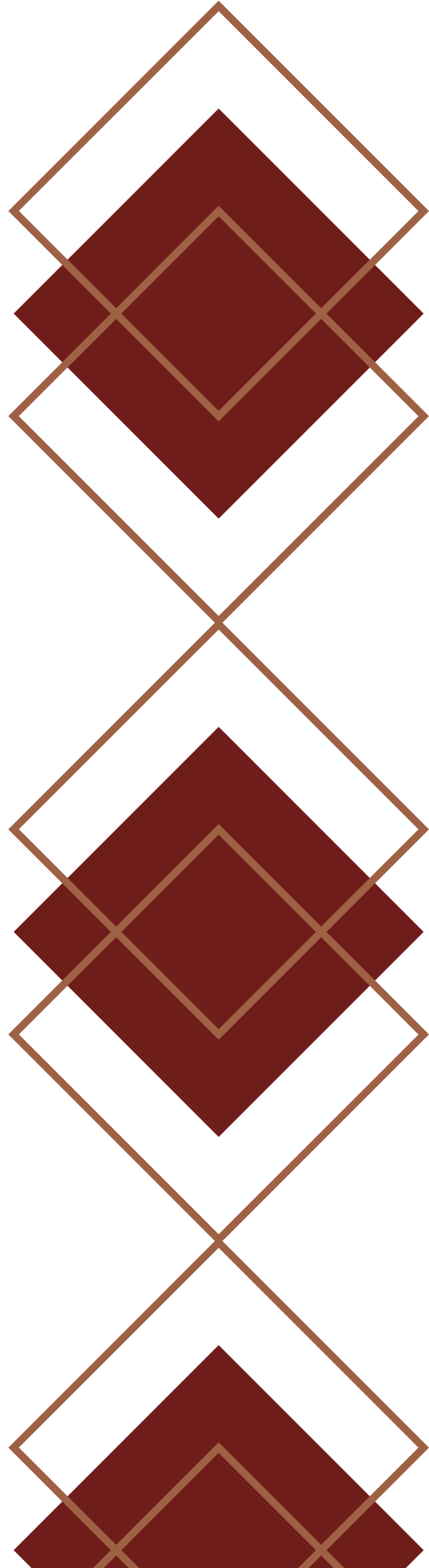
- ✓ A copy of a **Credit Counselling Summary** for high school students

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
- ✓ 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 the opportunity to choose mathematics as a pathway to future careers. In our in-person classes, students will develop a profound understanding of mathematical concepts and how it relates to the world. It is important for us to learn about mathematics in a way that highlights African culture and the contributions of all cultural communities around the world. In doing this, our students will begin to view math as a space in which they belong. This course is available to Grade 8 students entering high school in Fall of 2025.

ETHNOMATHEMATICS

Our course is centered around the principles of ethnomathematics to respond to math literacy disparities in the Black community. Ethnomathematics is the study of the connection between cultures and mathematics. Research conducted by education scholars have shown that ethnomathematics promotes a positive sense of self for Black students by highlighting mathematic contributions, strategies and concepts from Africa and around the world.

UNITS OF STUDY

01

NUMBERS

02

ALGEBRA

03

DATA

04

GEOMETRY &
MEASUREMENT

05

FINANCIAL
LITERACY

GRADE 9 MATH SCHEDULE

IMPORTANT DATES

COURSE SCHEDULE	Mondays & Wednesdays 6:00 PM to 9:00 PM - ONLINE
START DATE	Wednesday, February 19, 2025
COURSE WITHDRAWAL DATE	Monday, March 10, 2025
PARENT/TEACHER INTERVIEWS	Friday, April 11, 2025
MID-TERM	Wednesday, April 23, 2025
MARCH BREAK	Monday, March 10, 2025 - Friday, March 14, 2025
COURSE CULMINATINGS/EXAMS	Wednesday, June 25, 2025
END DATE	Monday, June 30, 2025

MATH IN ACTION

INTRODUCTION

MPM2D is an academic course that serves as a critical prerequisite for university-level mathematics courses in senior grades. Currently, the Ontario government has not announced any plans to de-stream Grade 10, making this course an essential step for students aiming to excel in advanced mathematics. In our engaging virtual classes, students will explore how mathematical equations can represent and analyze their favorite sports, making learning dynamic and relatable. This unique approach helps students connect abstract concepts to real-world applications, fostering deeper engagement with the subject. This course is open to Grade 9 students transitioning to Grade 10 in the Fall of 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	Tuesdays & Thursdays 6:00 PM to 9:00 PM - ONLINE
START DATE	Thursday, February 20, 2025
COURSE WITHDRAWAL DATE	Monday, March 10, 2025
PARENT/TEACHER INTERVIEWS	Friday, April 11, 2025
MID-TERM	Thursday, April 24, 2025
MARCH BREAK	Monday, March 10, 2025 - Friday, March 14, 2025
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MATH IN TRANSITION

INTRODUCTION

This course introduces the mathematical concept of the function by building upon students' familiarity with linear and quadratic relations. Students will explore the characteristics of both discrete and continuous functions, including trigonometric and exponential functions. They will learn to represent functions through numerical, algebraic, and graphical methods, solving problems that apply these functions in real-world contexts. Additionally, students will investigate inverse functions and gain proficiency in simplifying algebraic expressions. Throughout the course, students will engage in mathematical reasoning and articulate their thought processes while solving complex, multi-step problems.

MATH IN TRANSITION

Our course is designed to help students build a strong foundation for achieving their post-secondary goals. Through focused learning experiences, students will refine their skills and gain confidence in their ability to succeed in future mathematics courses. Our program intentionally integrates Black culture into mathematics, helping students understand that mathematics is their birthright. Our educators ensure that students feel confident in their mathematical capabilities, playing an integral role in encouraging them to continue pursuing mathematics in future careers.

UNITS OF STUDY

01

CHARACTERISTICS OF FUNCTIONS

02

EXPONENTIAL FUNCTIONS

03

DISCRETE FUNCTIONS

04

TRIGONOMETRIC FUNCTIONS

GRADE 11 MATH SCHEDULE

IMPORTANT DATES

COURSE SCHEDULE	Mondays & Wednesdays 6:00 PM to 9:00 PM - ONLINE
START DATE	Wednesday, February 19, 2025
COURSE WITHDRAWAL DATE	Monday, March 10, 2025
PARENT/TEACHER INTERVIEWS	Friday, April 11, 2025
MID-TERM	Wednesday, April 23, 2025
MARCH BREAK	Monday, March 10, 2025 - Friday, March 14, 2025
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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 Black students by providing a transformative educational experience tailored to their needs. Through culturally responsive teaching, we embed Black history, culture, and perspectives into every aspect of learning. Students are guided by skilled educators who prioritize representation, fostering a sense of belonging and pride. We emphasize academic excellence and personal growth, ensuring that students believe in their ability to pursue STEM careers at the university-level.

UNITS OF STUDY

01

CHARACTERISTICS OF FUNCTIONS

02

EXPONENTIAL FUNCTIONS

03

DISCRETE FUNCTIONS

04

TRIGONOMETRIC FUNCTIONS

GRADE 12 MATH SCHEDULE

IMPORTANT DATES

COURSE SCHEDULE	Tuesdays & Thursdays 6:00 PM to 9:00 PM - ONLINE
START DATE	Thursday, February 20, 2025
COURSE WITHDRAWAL DATE	Monday, March 10, 2025
PARENT/TEACHER INTERVIEWS	Friday, April 11, 2025
MID-TERM	Thursday, April 24, 2025
MARCH BREAK	Monday, March 10, 2025 - Friday, March 14, 2025
COURSE CULMINATINGS/EXAMS	Wednesday, June 25, 2025
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PROGRAM ADVANTAGES

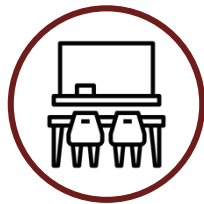
DID YOU KNOW...?

- 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
CURRICULUM**



**SMALL
CLASSROOM
SIZES**



**BLACK
EDUCATORS**



**TEST
PREPATION**



**AFRICENTRIC
SOCIAL-EMOTIONAL
LEARNING (SEL)**



ACCESS MATH FOR THE CULTURE

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