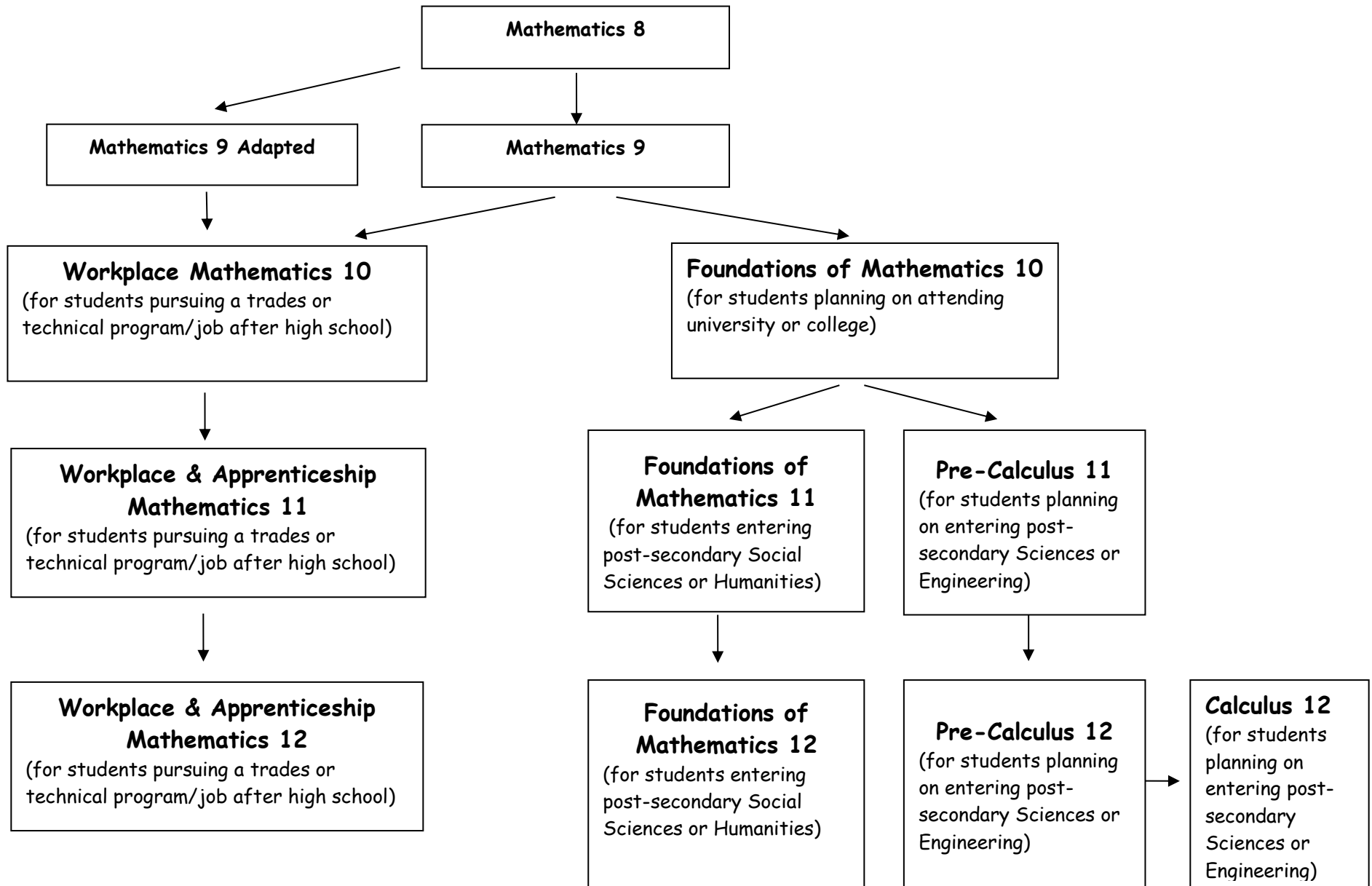


## Guide to Mathematics Curriculum Pathways



## Mathematics 9

This course expands on many of the topics taught in Math 8. Topics include operations with rational numbers, square roots and exponents, polynomials and algebra, linear relations, geometry and statistics. Students will engage in experiences with concrete materials, visualize, and discuss their thinking with others in order to create deeper understanding. Students will learn to be investigative thinkers, and will build perseverance through solving challenging problems. At the end of this course, students will be prepared for Foundations of Mathematics 10 OR Workplace and Apprenticeship Mathematics 10.

## Workplace Mathematics 10

This pathway is designed to provide students with the mathematical understandings and critical-thinking skills identified for entry into the majority of trades programs and for direct entry into the work force. Topics include understanding and applying the metric and imperial systems to the measurement of 2-D and 3-D objects, geometry and trigonometry, and the fundamentals of income, spending and debt. Students completing this course will move on to Workplace Math 11.

\*Students and parents are encouraged to research the admission requirements for post-secondary programs as they vary by institution and by year. Students may also choose to complete the Foundations of Mathematics 10 course concurrently pending departmental consultation.

## Foundations of Mathematics 10

This course is designed to provide students with the mathematical understandings and critical thinking skills identified for post secondary studies in both the arts and the sciences. Topics include surface area and volume of 3-D objects, applying trigonometric ratios to right triangles, irrational numbers, powers involving integral and rational exponents, polynomials, and coordinate geometry with linear relations, systems of linear equations, and function notation. Students with a credit for Foundations of Mathematics 10 are eligible to take Foundations of Mathematics 11 or Pre-Calculus 11.

\*Students and parents are encouraged to research the admission requirements for post-secondary programs as they vary by institution and by year. Students may also choose to complete the Workplace and Apprenticeship Mathematics 10 course concurrently pending departmental consultation.

## Workplace Mathematics 11

This course is strongly recommended for students who are planning on entering the workforce directly after high school, or who are planning on pursuing a career in the trades industries. Topics covered may include reasoning, rates of change, measurement, and statistics. Students who successfully master the learning outcomes of this course may continue on to Apprenticeship Mathematics 12. This course satisfies the Ministry of Education's mathematics graduation requirements

## Foundations of Mathematics 11

This course is strongly recommended for students who are planning on pursuing post-secondary studies in the arts or the humanities. Topics studied may include logic and reasoning, functions, geometry, and statistics. Students who successfully master the learning outcomes of this course may continue on to Foundations of Mathematics

12. This course satisfies the Ministry of Education's mathematics graduation requirements. Students who are planning on pursuing post-secondary studies in math or sciences should take Pre-calculus 11.

\*Students and parents are encouraged to research the admission requirements for post-secondary programs as they vary by institution and by year.

### Pre-Calculus Mathematics 11

This course is strongly recommended for students who are planning on pursuing post-secondary studies in math or sciences. Topics covered may include relations and functions, trigonometry, polynomial functions, and graphing. Students who successfully master the learning outcomes of this course may continue on to Pre-calculus 12. This course satisfies the Ministry of Education's mathematics graduation requirements. Students who are planning on pursuing post-secondary studies in the arts or the humanities should take Foundations of Mathematics 11.

\*Students and parents are encouraged to research the admission requirements for post-secondary programs as they vary by institution and by year.

### Apprenticeship Mathematics 12

This elective course is recommended for students who are planning on pursuing a career in the trades industries. Topics covered may include buying/leasing vehicles, small business management, linear relations, accuracy in measurement, trigonometry, and statistics.

### Foundations of Mathematics 12

This elective course may be required for some students who are planning on pursuing post-secondary studies in the arts or the humanities. Students and parents are encouraged to research the admission requirements for post-secondary programs as they vary by institution and by year. Topics studied may include financial decision making, investments, functions (polynomial, exponential, logarithmic, trigonometric), and probability.

### Pre-Calculus Mathematics 12

This elective course may be required for admission into post-secondary. It is strongly recommended for students who are planning on pursuing post-secondary studies in math or sciences. Students and parents are encouraged to research the admission requirements for post-secondary programs as they vary by institution and by year. Topics covered may include trigonometry, functions (trig, composite, logarithmic, exponential, polynomial, and rational), transformations, logarithmic and exponential equations, and combinatorics.

### Calculus 12 (or Calculus 12 AP)

This elective course is strongly recommended for students who are planning on pursuing post-secondary studies in math or sciences. Students may elect to write an Advanced Placement exam upon completion of this course and obtain credit for a first year Calculus course at most post-secondary institutions. It is recommended that students have credit for Pre-Calculus Math 12 before starting Calculus 12, although the two courses may be taken concurrently.