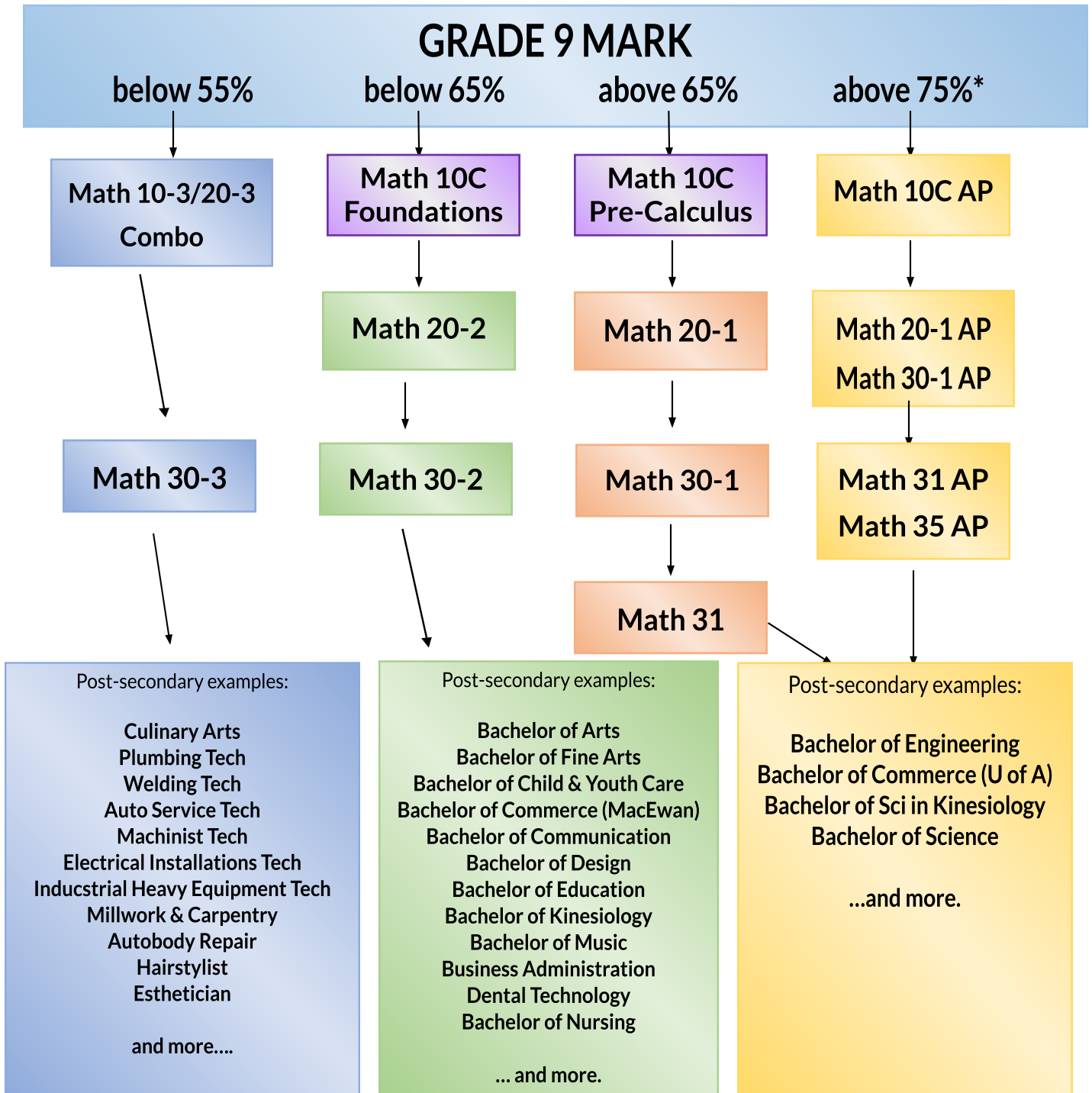




# MATHEMATICS CURRICULUM



Please refer to the proficiency checklist for more help in determining the stream that is right for you. Arrows show typical routes in curriculum.

\*Students choosing the AP stream should be passionate about learning math. It's not just about your mark, but your commitment to higher level, long term math courses.

A grade above 65% in Math 9 is **strongly recommended** to take Math 10C Pre-Calculus.

**ALWAYS** check information with the post-secondary institution and program you wish to apply for. Prerequisites vary per institution and institutions sometimes change entrance requirements from year to year.

# More than Marks: Mathematical Proficiency Check-list for Math 10 Course Selection

When selecting your Math course, consider which of the following skills you use regularly. Check each box that applies to you. Colour half the box if the statement is partially accurate. Take some time to reflect honestly on each point. Keep in mind, **each of these items can be improved with practice.**

## 1. Effort, flexibility & attitude (*Productive Disposition*)

- I am **self-motivated** and put in a **high degree of effort**
- I am **diligent** and **persist** when faced with challenging work
- I regularly **get help** from sources other than my teacher (peers, textbook, on-line)
- I believe math is **useful** and learning math is **worthwhile**
- I have a **positive attitude** towards math; I enjoy working through problems
- I **collaborate** well (take turns, ask questions, respectfully challenge and defend ideas)

## 2. Communicate and justify thinking (*Adaptive Reasoning*)

- I can easily **explain my thinking** in words and in writing
- I easily separate my thinking into **small steps**
- I **describe** specific steps and **justify** the reasons I chose each step

## 3. Formulate, represent and solve problems (*Strategic Competence*)

- I **formulate strategies** to solve problems
- I use models to represent my thinking (**draw images** and graphs)
- I pay **close attention to details** and take a **systematic, methodical** approach
- I **adapt my strategies** based on the information presented

## 4. Use strategies effectively (*Procedural Fluency*)

- I **use formulas** and algorithms quickly and correctly
- I use **strategies** or 'tricks' to remember procedures
- I perform **mental math** efficiently (in and outside of class)
- I regularly **estimate** (in and outside of class)

## 5. Understand concepts (*Conceptual Understanding*)

- I **understand** mathematical concepts.
- I know the **meaning** of what I am doing
- I know the **reasoning** for my choices
- I recognize **connections** between different concepts
- I **apply** concepts to new situations

## When I think about what I want to do after highschool, how central will Math be to my potential plans?

- A. I'll need advanced Math including calculus. *For example:* Engineering, Computing Science, Commerce, Kinesiology etc..
- B. Advanced Math skills will be important, but I won't need calculus. *For example:* Nursing, Education, Arts, Communications, Fine Arts, Respiratory Therapy, and others.
- C. I am interested in a trade that doesn't require advanced math, or I want to enter the workforce after high school. *For example:* Culinary Arts, Travel and Tourism, Legal Assistant, Welding, Millwright, most Trade Apprenticeships, and others.

## Using the Checklist to Assist with Course Selection

Tally the number of checks and record your answer to the question above.

**Keep in mind this checklist is just one tool to help you determine your best fit course selection.** Each skill can be improved with practice.

\_\_\_\_\_ (number of checks) \_\_\_\_\_ (A,B,or C from question above)

If you have **fewer than 10 checks**, there is a higher likelihood of struggling in 10C. You may want to consider 10-3.

If you have **between 10 - 15 checks**, you may struggle in 10C (Pre-Calculus). You may want to consider 10C (Foundations).

If you have **between 15 - 20 checks**, you may want to consider 10C (Pre-Calculus) or if you are a rigorous student, 10C (Advanced Placement)