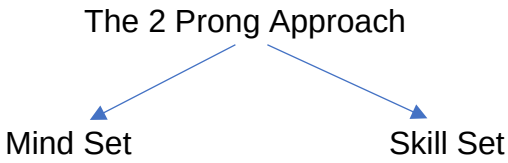
Ready For Grade 12 Pre-Calculus Math?



To achieve success in Pre-Calculus Math, Math 30-1 in Alberta, it is my belief that attention needs to be given to both a strong Mind Set and a strong Skill Set. I would like to present some thoughts on how to help students prepare for the rigors of this course.

An important underlying premise is that if you are **aware** of what lies ahead, it will be much **easier** to deal with; rather than have this **blindsided** feeling after you start. I have seen many students, after the first week, say, “wow, what just hit me”?

There are two videos, one for each prong. I will try to pinpoint specific, concrete ideas that you can do to ease the initial stress and increase the likelihood of success. In the videos, I will expand on some of the points mentioned in this blog post.

Mind Set

It is **easier** to deal with something when you are **aware** of what lies ahead.

- Be ready for a significant amount of material and moving through that material at a brisk pace. It is so important to keep up. If you miss a class, be proactive to find out what is missed and do your best to catch-up. You do not want to get behind. I am an Edmonton Oiler fan. The 22-23 edition has fallen behind early in far too many games. There is a phrase to describe this team. They are often “chasing the game”; in other words, scrapping to come from behind. Many people have told them, “don’t chase the game”. Applying this to math, don’t “chase the course”. Have a strong start. I have used a strategy with students I call “start while you are ahead”. Essentially, watch the video lesson before you hear it from your classroom teacher. The level of confidence and understanding can increase dramatically! If you haven’t started the course yet, you can read more about this intriguing strategy: https://mathpqjq.com/math-learning-strategy-start-while-youre-ahead/
- Continuing with sports, I am a big fan of practice. Sports is a great analogy. The most skilled sports teams or individual athletes in the world still must practice. Do

not underestimate the importance of practice as you strive for math success. Two stories of practice and focus are shared in the video.

- Know that there will be some concepts that will challenge you. That is alright. But, be determined to “do what it takes”. Do not let it take you down. You must ask if you do not understand. Understanding is so crucial! Seek supplemental resources, like The Grand Math Connection
  https://mathpqjq.com
  Put in the extra time. Go the extra mile. “Do what it takes”.
- When it gets hard, you have two choices. Quit or stay the course. Make up your mind now, what your choice will be.
- Believe you can do it as soon as you walk in the door to the classroom, or the door to your computer. Build confidence through hard work and success. Develop strong study skills. There are many things you can do that are within your control.
- Where is your motivation coming from? How important is this course for you? It is amazing what can be accomplished when something is very important to you!

Skill Set

There are many math skills and/or concepts, that with a strong foundation, will lead to a greater likelihood of success. My list is not necessarily exhaustive, but I think I have hit many of the highlights. There is no doubt that the more you can master, the better. If time or other circumstances dictate, you may have to pick and chose. Everyone is an individual learner, and the stage of your development is often different than it is for others.

I would like to suggest a primary list, and a secondary list. If you feel that a brush up on your skills would be wise, just follow the links provided. Use these suggestions as you see fit.

PRIMARY

Factoring

https://mathpqjq.com/factoring-trinomials/

https://mathpqjq.com/difference-of-squares-factoring/

Isolating a Variable

https://mathpqjq.com/isolating-a-variable-gr-11/

Clearing Fractions

https://mathpqjq.com/clearing-fractions/

Special Triangle Ratios

https://mathpqjq.com/special-triangle-ratios/

Quadratic Transformations

https://mathpqjq.com/quadratic-equation-transformations/

Solving a Trigonometric Equation

https://mathpqjq.com/solving-a-trigonometric-equation/

SECONDARY

Division of Radicals (rationalizing the denominator)

https://mathpqjq.com/division-of-radicals/

Domain and Range

https://mathpqjq.com/domain-and-range/

Working With Intercepts

https://mathpqjq.com/intercepts/

The Quadratic Formula

https://mathpqjq.com/solve-quadratic-equations-with-a-formula/

Basic Fraction Operations

https://mathpqjq.com/fractions/

Solve a Linear System Algebraically

https://mathpqjq.com/solving-a-linear-system-by-elimination/

Closing Thoughts

- Calculator efficiency is crucial; be ready to solve equations graphically.
- Be aware of questions with letters instead of numbers.
- Remember a point on a graph satisfies the equation; this can be used to find unknown variables.

- Extraneous roots. What are they?
- The phrase “In terms of” will be used often.

STAY POSITIVE, BELIEVE IN YOURSELF, WORK HARD, AND REAP THE REWARDS.