How to be Successful in Math

• When you go to class:
  - Be on time.
  - Come prepared with materials.
  - The brain can only absorb so much new information at a time. So, before class, read, or at least skim, the sections in the textbook to be covered during class, in order to extend your learning time.
  - Turn off your phone during class.
  - Stay focused, take notes, and anticipate the next step.
  - Contribute to a learning environment: ask questions.
  - Don’t get distracted, or be a distraction for others during class.
  - Use all the class time to cut back on your study time; don’t leave early.

• Attitude:
  - Keep a positive attitude. It will help you concentrate and retain information.
  - If you have had a bad experience with math in the past, let it go. Each semester is a new experience.
  - Many students do better in math as they get older.
  - Remember your IQ is flexible, just like a muscle. Exercise it to make it stronger.
  - Your ability to do well in a math class is greatly dependent on your study habits!
  - Do not merely try to pass the class; try to excel! You might just surprise yourself!

• When to study:
  Research has shown:
  - Study as soon after class as possible.
  - Four one-hour study periods on different days will be more productive than one 6 hour study period.
  - If you study for more than hour, take a break every 50 minutes.
  - Study every day and if possible at the same time of day.
  - Study your hardest subject first.

• Textbook strategies:
  - Bring your textbook with you to class! Pay attention to any textbook references that your instructor makes.
  - Read the examples provided in the textbook, along with examples your instructor showed you in class. These will be great resources when doing your homework!
  - Many times, the textbook will refer you to a specific example before working a set of problems. Go to that example and read it!
  - If your instructor assigns homework outside of the textbook, use your textbook as an extra study guide. Many times there are cumulative reviews that will help you when studying for an exam.
  - The back of the book may contain answers to certain problems in order for you to check your work.
  - Pay close attention to highlighted/boxed information. These areas usually cover important rules or tips for completing the problems.

• Notebooks:
- Get a spiral notebook just for math.
- Keep the syllabus and handouts in the notebook.
- Take notes during class and when reviewing the textbook.
- Review your class notes as soon after class as possible and add more information when necessary.
- If you don’t understand something as you review the notes, ask your instructor to clarify it for you. Do this before the next class session!!
- Put notes in the margin over any material you want to ask about in class.
- Keep it neat, in order, and use proper notation.
- Work your homework problems in the notebook, too. Label the assignment, so you will know with which section it corresponds.
- Write down every step!

**Homework skills:**
- Homework is where you practice and hone your skills for the various techniques.
- It is important to do all the homework and in a timely manner, even if it is not worth points.
- Start by working the examples in the textbook. Then, if you have problems, you can check all the steps.
- **Work the problems on paper!!** Whether you are assigned homework from the textbook, or from the computer, work the problems on paper. Then, if necessary, type the answers into the computer.
- Label the assignment name at the top of the paper, and label each problem with its specific number.
- Write all the steps and use proper notation.
- Work all the problems in order and leave a space if you need help with it. If you do not know how to complete a particular problem, then refer back to your notes and textbook examples. If they don’t help, go see your instructor….and bring your work with you!
- After completing the homework, if you do not feel confident applying the various techniques, work more problems!
- When finished with a homework assignment, you should be able to do any of the problems, again, **without** any help from examples or your instructor.
- Math is a skill which REQUIRES practice.
- Practice also helps you identify which differences in notation are significant.
- Allow time ON-CAMPUS to get help from your instructor and/or the math lab, if you need it.
- Memory is the lowest form of learning; use it to make the higher forms of learning easier.
- Be sure to use long term memory since you will need this information in all your math classes.

**Math software:**
Many of TCC’s math classes use online software which is user friendly. This can initially be intimidating, but feel free to open the software and look around. Click on all the buttons. You can’t hurt anything.
- Try the “Take a tour” button, if available.
- Math software frequently has videos, animations, and other aids that simulate having a teacher 24/7!
- An online textbook may include “You Try It Buttons” and other multimedia aids.
- Online assignments usually provide you with instant feedback and frequently have links for additional help.
- Also, some online assignments may have the advantage of multiple attempts, which is a good way to raise your grade. So, be sure to check the syllabus for this type of information.
You may be able to print some assignments and work them on paper before entering the answers online. Ask your instructor if this feature is available, and pay attention to instructions, if available.

There are MANY computer labs for you to access the necessary homework. Be sure you know the location of all computer labs on your campus.

Basically the software is a tool like any other to help you be successful. Even if the software is unfamiliar, don’t be discouraged. Just jump in! You will adjust to it quickly, and you will find it very helpful! Remember, your instructor is available to answer questions or assist you in getting started.

**Test taking skills:**

- Studying for a test starts the first day of class as you master the techniques and build your knowledge base.
- Cramming for a math test will not give you a desirable outcome since this is short term memory.
- Tests are more difficult than homework, since you must decide which techniques to apply to solve each problem. This requires a greater knowledge base and analytical skills. So, after each class session, strive to understand how the new topics relate to ones previously discussed. How are the similar? How are the different?
- It is important to review the material and integrate the different sections covered by the test. Strive to see the “big picture”. Why do certain rules apply to some instances, and other rules apply to different situations?
- The night before a test, get a good night’s rest to keep careless mistakes to a minimum.
- Eat before the test; research has shown this helps performance.
- Go to the bathroom before going to the classroom, so you won’t be distracted.
- Show up at least 5 minutes early, so you are not rushed.
- Bring pencils and other allowed materials.
- When you are first given the test, write down formulas and procedural steps before you start work on the problems.
- Work out the problems using all the steps and proper notation.
- Skip problems with which you are not comfortable and come back to them.
- When you are finished, if you have time, go back and look at your answers. Be sure you answered every question, have simplified the answers, wrote the answer in the appropriate format, and check your answers to be sure they are reasonable.
- When you get your graded test back, be sure to look at all the problems you missed. Learn from your mistakes! Ask for help, if needed.

**Math anxiety:**

A “cure” for math anxiety may not exist. However, there are many things you can do to manage/minimize it. Most of the time, math anxiety develops due to repeated failure on math assignments and/or exams. You need to take steps to stop failure from occurring in the first place.

- Make sure you completely and thoroughly understand every single topic covered in class. If you don’t, go see your instructor. Work on anything confusing, until you reach the point where you understand it. Be positive! Just because you may have misunderstood math in the past, does not mean you will always do that. YOU CAN LEARN IT!!!

- Before taking an exam, make your own practice exam. Write out several problems on blank paper. Include the directions with each problem. Put away all books, notes, etc. Put yourself in
the same situation that you will be in during the exam. Then, take your exam. If you do not know what the directions are asking, skip the problem. Work all the ones you can. Then, get your book and notes back out. Study the problems you were unable to complete. Make sure you understand what the directions are asking.

- If you are worried because you think you will run out of time on an exam, then discuss this with your instructor. Ask how many questions will be on the exam. Determine how much time you will be able to devote to each problem. Then, study and practice until you can complete the problems in that amount of time.

- **Talk to your instructor:**
  - Your instructor is invested in your success. Do not hesitate to ask them questions, email them for help, or visit them during office hours.
  - You may also go to the TCC Math Lab areas on any of the four campuses for additional help.
  - Form a study group.

- **Consecutive classes:**
  - Once you start taking math classes, continue until you have completed your whole sequence.
  - It is easier to continue while the previous course is still fresh in your mind.
  - Skipping semesters other than summer creates additional refresher work for you.