

# Success in Math 150

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Students committed to learning will find many possible paths to success. No path is error free, but the path best for you may not look like the same path as another student. For this reason, students should continuously assess their academic progress in courses and adjust their academic strategies accordingly.

While there is no magic formula, the following suggestions may improve your ability to succeed in MATH 150 and increase your retention of knowledge.

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1. **Learn the language of Math.** Math has a language you must learn to speak/understand. If you typically do well learning vocabulary in other courses, then treat formulas, theorems, symbols and other math content like vocabulary. Part one of your textbook highlights the fundamentals that you should comprehend to be successful early in the course.
2. **Maximize the web-based learning experience by:**
  - **Commit weekly blocks of time for Math 150.** Plan time in your schedule as if you were spending this time in class.
  - **Review daily.** Even 15 minutes on days you would otherwise do no work for the class, review basic concepts to supplement your learning.
  - **Take quizzes as many times as they are allowed.** If there is no penalty to repeating the quizzes, then it certainly benefits your learning and your quiz grades.
  - **Do homework/assignments early.** It's easy to get help if needed when you have a few days left before a due date; do not expect much help available on the due date.
  - Reading all directions.
3. **Know your grade at all times.** Track your grades using the Math 150 Grade Estimator to know your current progress. Your final grade in the course is likely to mimic your grade at any point if you maintain the same study strategies/habits. Knowing your grade will help you to determine if you must adjust your study habits/strategies to improve.
4. **Take textbook notes.** Your textbook is your lecturer. Take notes from your book much like you would take notes in class, and review these notes.
5. **Divide your reading into smaller sections. Read one section, then read it again. And again.** Reading math textbooks is like no other reading you will do—math textbooks are all details and no fluff. You can help yourself by reading aloud to ensure you do not skip critical details in formulas.

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6. **Skim the next lesson plan and the next chapter.** Knowing “*what’s next?*” will help you to better understand the importance of content in your current lesson plan and book chapter.
7. **Use a step-based approach to problem solving.** Try this (or another) approach to problem solving:
  - **Step 1: Analyze the problem:** Read carefully. What facts are provided? What will be your outcome? If this looks similar to past problems, what did you do to solve those problems?
  - **Step 2: Plan:** Outline your strategies to solve the problem. Draw sketches, write formulas, or theorems that will be used, look for patterns, etc.?
  - **Step 3: Solve:** Follow your planned strategies to solve the problem. Always show all work.
  - **Step 4: Check:** First, review your steps for simple mistakes you may have made. Second, test yourself-can you provide a reasonable explanation of your answer. Is your answer plausible?
8. **The correct solution process is the right answer.** You may be able to get the right final answer as a fluke, without having any idea how you did. Focus on understanding the solution process as the right answer.
9. **Use extra study opportunities to learn with peers.** Problem solving in groups is a key consequence of long-term retention of knowledge. Be actively involved in recitation, Supplemental Instruction, the math help room, or other study group opportunities. Your course encourages working in groups –so do it!
10. **As soon as you struggle, determine why.** Math concepts are progressively cumulative; hence, you must resolve your struggles with one concept before your struggles compound. Besides using group study opportunities to develop your ability level, also connect with your instructor or TA.
11. **Do all homework.** Math homework replicates what may appear on quizzes. Hence, all homework is preparation for quizzes.
12. **Embrace repetition in problem solving.** If your instructor expects you to solve 10 problems, consider this your minimum. You should work out every problem twice and do extra problems. This extra effort may boost your final grades significantly.
13. **Be logical and critical.** Problem solving is a process of logical steps, but to be a good problem solver requires critical thinking ability.