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**Study Suggestions for Math Students**  
**Counseling Center**  
**Lydia Minatoya, PhD**

**Before each class look over textbook material by:**

- Reading the introduction and summary sections
- Looking at the problems at the end of the chapter
- Writing down questions to ask in class or during the instructor's office hours

**Go to each class!**

**During each class:**

- Try to anticipate what the answer might look like.
- Copy the problem as the instructor solves it on the board.
- Pay particular attention to what the first step is.
- Try to anticipate what might be the next step in the problem.
- Write down what instructor says about how to get from one step of the problem to the next
- Listen for and try to understand why a particular approach is taken to solving the problem

**If you don't understand what the instructor is saying,**

- Underline the point in the problem where you got lost. That way, you can ask how to solve the problem from that point onward.
- Ask questions.

**After each class:**

- If math is a difficult subject for you, study it first, when you are most alert and fresh. Do not study when you are hungry. Try to study in the Math Learning Center so you can ask questions if you get stuck.
- Read through your notes and the examples from class to refresh your understanding and recall.
- Read the textbook, as assigned.
- Do your homework problems! Following the teacher as she/he solves the problem on the board is easier than solving the problem by your self. This is similar to the difference between watching someone drive and developing the skill of driving by your self. Homework helps you move smoothly from watching, to understanding, to doing the problems independently. It also helps you practice problem-solving skills before you have to take quizzes or tests.
- Take a 5-minute break every half hour.

**Solving math problems:**

- Slowly read through the problem, aloud under your breath (this helps you concentrate)
- Ask yourself, "What is the problem asking me to find?" try to state this in your own words.
- Read each step of the problem and write down in symbols all the information that is given
- Based on examples your instructor or textbook has shown you, develop a plan for solving the problem
- Think of formulas or definitions that may be useful.

**When stuck on a problem:**

- Take a deep breath, slowly in through nose, slowly out through mouth.
- Read the problem aloud, under your breath (sub-vocalization) and tell yourself, "I'm just going to take this step by step",
- Break the problem into simpler sub-problems.
- Try solving a similar type of problem using extremely small or large or easily understood numbers, and then follow your example as if it were an example from the text. (For example, if a student panics and forgets how to start a problem of  $140 \times 12.2 = ?$  The student might try changing the problem to  $140 \times 10.0 = ?$  Then, the student would use the same steps to approach the more difficult problem.
- If you are making no progress, take a break, and return to it later.



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#### **After answering a problem:**

- Check to see if your answer is written in the proper form.
- Insert your answer back into the problem to see if it “works”.
- Ask yourself if your answer is reasonable.

#### **Preparing for quizzes and tests:**

- Start studying early! Plan several days each covering a reasonable amount of material. Do not study late at night. “Cramming” and “all-nighters” do not work!
- If the instructor has prepared a study guide or tells the class what material will be covered make sure you follow it to prepare a list of problems and formulas to study.
- You may ask your instructor if the test will stress lecture, textbook or homework. You may ask what types of problems will be stressed.
- Rework homework and textbook problems. Use some as practice test questions under similar conditions to the actual test (no notes, time limit, quiet place, etc.)
- Try to study in the Math Learning Center so you can ask questions.

#### **Taking quizzes and tests:**

- Look over test to get general idea of how much time you have for each problem.
- If there are formulas or “rules” that you are afraid you will forget, quickly jot them down.
- Do not rush. Take a deep slow breath. Read each problem aloud, under your breath, make sure you understand what is being asked of you, then talk yourself, step by step, through the solution. This helps you focus and avoid errors.
- Show all your work. Instructors often give partial credit.
- If stuck, go on to another question.
- Give priority to the questions worth the most points and to those you know you can answer.

#### **After the test:**

- Ask yourself what were your biggest sources of error: lack of time to take the test, careless mistakes, misreading the question, not understanding the material, test anxiety/panic?
- Consult with your instructor and the Math Learning Center on ways to improve your understanding of the material. Make an appointment with the Counseling Center to improve time management or study techniques or to reduce test anxiety. Room CC 2446B, 206-527-3676 (No counselors are available during quarter breaks and summer quarter).
- If you have disabilities that influence your academic success, consult with Disabilities Services. Room CC2445B, 206-527-3697, TTY 206-526-0079

**The NSCC Counseling Center helps students identify careers, pick programs of study, strengthen study skills, manage time and stress, deal with depression, confront prejudice and learn other student success skills.**

**Please visit our self-help web site for information on dozens of topics.**

<http://www.northseattle.edu/services/counsel.htm>

For life threatening situations, call 911. To contact a 24-hour community crisis line in the Seattle area, contact the Seattle/King County Crisis Clinic:  206-461-3222. Website: <http://www.crisisclinic.org>

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