What does it mean to study 8-12 hours a week for a math class?

We suggest to students that they should spend 8-12 hours a week studying for class, but what does that mean? What do we expect and what activities should be part of that time? Below is a possible strategy for studying. Everyone studies differently but if you really focus the time spent it can be made much more effective. I will break this down by what you should do minimally every day to give yourself the best chance to be successful, then I will suggest activities beyond the minimal effort.

The minimal effort every day
- After class you should take around 30 minutes to reread your class notes. During this time be sure to highlight the big ideas and key examples. Also write down all questions you have.
- Try the homework. You may not complete it all but at least be sure that you are able to do some of the problems and read the rest to be sure you would know where to start. Again write down all the questions you have.
- Go back through the section in the text and try to answer your questions. If you are not able to answer them make a plan to get them answered by your peers or instructor.
- Read the section in the text that will be covered in the next class. Familiarizing yourself with the material will make it easier to understand during class.

The next steps beyond the minimal effort
- Begin a list of big ideas from the course that will act as a study guide when the time comes to prepare for quizzes and exams. The list should include definitions, theorems and examples of problems that are related to the definitions and theorems. The list should come from your class notes and the textbook. Try to write definitions and theorems, both as stated in class or the text and in your own words. Draw pictures to illustrate as many ideas as you can.
- Complete all the homework. Work with peers if possible and complete the homework. Write down all questions that you have and make a plan to get them answered.
- Go back through your list of big ideas and see if you still have questions on previous material. If so, write down your questions and make a plan to get them answered.

The final steps to understanding the material
- Make sure you have been able to get all your previous questions answered by the text, your peers or your instructor.
- Go back through your list of questions and be sure that you know the answers and can choose a problem from the text or class notes that illustrates the answer or can write and solve your own problem that illustrates the answer.
- Complete the problems you have chosen from the previous step and other unassigned or chapter review problems.

Preparing for an Exam
- You have done much of the work above to be prepared. Use your list of big ideas and list of questions and answers as the starting point for preparation. At least a week before the exam go back through both of these and get answers to any questions you still have.
- Do as many problems as you can, at first using your list of big ideas and answered questions as a resource and then slowly not relying on them at all.

The 3 keys
- Write down and get your questions answered. Keep a running list of questions and answers.
- Create a list of big ideas and related problems from the class. Set the precedent early that you are going to do this and stay on top of it.
- Work with your peers whenever possible and focus this work on your unanswered questions.

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