

## Suggestions For Reading Your Math Textbook

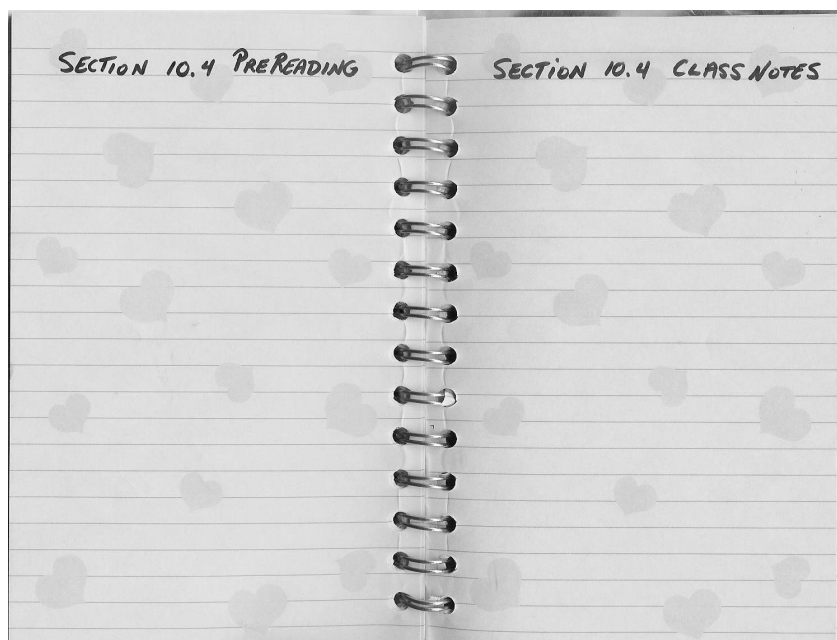
Reading a math textbook is unlike any other kind of reading. It is like simultaneously reading a dictionary, thesaurus, encyclopedia, instruction/assembly manual, a piece of nonfiction, a history text, and a novel. If you use your textbook only for its problem sets at the end of each section – regardless of whether or not you can finish them all – you are missing valuable and useful information. It is like watching an entire movie with the volume turned off; you might get the gist of the story, but chances are you will have missed some important aspects. It is tempting to try the assigned problems first, and if you encounter one you can't do you go back and find one similar. That approach often wastes time and leads to more confusion. Here are some suggestions to get the most out of your math text.

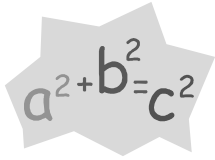
First and foremost, **pre-read** sections before they are discussed in class. Even if you don't understand *everything* in a section, you will come to class with *at least* a skeleton; during class you will be able to hang some meat on the bones.



Some pre-reading tips:

- a. **Skim** the section to get a general idea what the section is all about.
- b. Next, pick up a **pencil** and your **notebook**, and **re-read** the section slowly. A math text is not designed to be read as fluently as a novel. It requires greater concentration and effort. You might find the following suggestion helpful: in your notebook, take pre-reading notes on the left-hand pages, and save the right side pages for class notes.




$$a^2 + b^2 = c^2$$

- c. Write down new **vocabulary** words and their definitions. If a word is used that you don't understand, write it down and leave space to fill in a definition later.
- d. **List formulas, equations and theorems** from the section. If the authors of the textbook thought an idea was important enough to highlight it or put it in its own special box, chances are it is something you'll be expected to know.
- e. Read through the **examples**. They are ideas in action.
- f. Read the **pictures and diagrams**. They often provide clarification to examples and concepts. **Visualizing** mathematical ideas is extremely important to gaining true understanding.
- g. **Write out any questions** you still have after reading the section. Hopefully they will get answered for you in class. If not, **ask!**
- h. Look at the problem set. If you have pre-read carefully, you should be able to quickly **pick out** typical, routine problems. **Do** these problems to make sure you understand them. Math is not a spectator sport. You will not get better at it by just looking. A concert pianist practices long and hard before a performance – if you think of your chapter test as *your* final performance, you will need to practice long and hard to avoid mistakes.

During class, **fill in** blank spots from your pre-reading notes. Use the right side of your notebook to write down **additional examples** and ideas. Make sure your questions get answered.

After class, **re-read** the section. This will aid in retaining the material for the long term, and should significantly reduce the amount of time spent 'cramming' the night before a test.

**Do** the assigned **homework** problems. If you encounter a problem you simply can't solve, make a note to ask about it before or during the next class period.

If, after completing an assignment, you still aren't confident &/or you believe **additional** problems would be beneficial, you can re-do the examples from the section or find similar examples in the chapter review.

