Listening and Note-taking

Enhancing your listening skills: The more focused and involved you are in class, the more you are engaged and actively listening, the better your notes will be for reflecting important information being conveyed. Active listening means writing down not only what is being said but also thinking about what is being said. It is a time for you to be actively processing information. Here are a few helpful hints to help you become a good listener.

- ✓ **Sit up front or in the middle of the class, if you can get a seat there.** Sitting next to the door, near the windows, or at the back of the room can place you in locations where you will be distracted by noise or movement made by other students. Also, if you are a visual or auditory learner (one that learns best by seeing and listening) you need to be where you can see the board and hear the instructor. You will pay closer attention if you are sitting near the instructor and the board and that will help you stay focused and paying attention.
- ✓ **To get ready for class, do some warm up problems or review your notes.** If you work a couple of problems or read over the previous lecture notes right before class, you'll be more ready for new information and you will remind yourself of questions you might have had for the instructor. Warming up gets you ready for class, ready to listen and ready to take notes.
- ✓ **Be on time and get ready to be an active listener.** Be on time to class and be ready to be engaged. Arrive a few minutes early and get situated. Turn off your cellphone! Put it in your backpack where you won't be tempted to check your tweets or Facebook page!
- ✓ **Learn your instructor's style of lecture.** If your instructor refers to the book a lot, make sure you take your book to class. If the instructor never writes anything on the board, then you need to be prepared to listen closely to what is being said or to any references that are being made to other materials and document as much of what is being said as possible. If the instructor's lecture pace is too slow, make sure you can think of ways to stay focused and paying attention. If the pace is too fast, learn some abbreviations that you can use in your notes so you can keep pace.
- ✓ **Ask questions and listen to other students questions.** If you are confused or if you don't understand something being said, ask for clarification. Instructors generally will respond either by repeating the information or by trying to find another approach to explaining the problem. And listening to what questions other students ask is equally important, as those may be questions you had or might have later when you do your homework. Passively taking notes and not thinking about what is going on diminishes the full benefit of the lecture. If your math is held in a lab setting that doesn't have lectures, though you may not have to listen to a lecture, you will want to make sure you listen to your instructor's explanations when they sit down with you to work. You want to make sure to document any one-on-one instruction that you receive, just as you would if in a lecture environment.
- ✓ **Find someone to sit next to in class that is interested in taking notes and doing well in the course.** First and foremost, another student interested in taking full advantage of class time won't create a distraction by trying to talk with your during class. Forging a relationship with another student who strives to listen and take good notes can be of great benefit to you if you need clarification of your notes.

Note-taking

The most difficult aspect of taking notes is documenting what your instructor is writing and saying and also fully understanding what is being shared. Whether you are in a lecture class or some other form of instructional model, like a math lab, your notes are key to making sure you obtain the most information from your class time, while also creating a document that will help you maximize your learning and be a useful resource to you when you are trying to do your homework or study for an upcoming exam.

There are many methods you can use to take notes, but one method that works very well in math classes is the Column Method. There is a 2- column method and a 3 - column method and the benefit of using either of these methods is that it allows you to record all of the information you need to record to help you solve math problems, while also providing a good format for rehearsing that information later.

To use either method is easy. For the 2 – Column Method, you simply draw a line down the middle of your notebook paper to make vertical columns, making the left column slightly narrower than the right column. In the left column, you will record concepts, procedures, main ideas, or rules. In the right column, you will record the examples. For the 3 - Column Method, you divide the notebook page into three vertical columns. In the far left column record key words, concepts, main ideas, or rules. In the middle column, record the examples. In the far right column, record the steps or procedures. The only difference between the two is that in the 3 – column method you are separating the concepts, ideas, and main ideas from the procedures.

Using the column approach helps you concentrate on the most important information you need to record because it forces you to organize information as you write it down. Thus, it helps you maintain focus when in class and promotes active engagement. It also keeps you from having those chaotic notes where you have a hard time finding certain examples when you need them. One thing you will need to adjust to in using the column methods is to NOT put anything in a column that doesn't belong there. Otherwise, your notes may end up looking just as chaotic as before. It takes a bit of practice, but it won't be long before you will be automatically recording information where it should be recorded.

Regardless of what system of note-taking you use, there are some guidelines/techniques for taking notes that you should follow (*adapted from Math Study Skills, Alan Bass; Becoming a Master Student, 12th ed., Dave Ellis*):

- ✓ Start each class with a new sheet of paper. Record the topic, section, and date at the top of the paper. It is also helpful to number the pages of your notes.
- ✓ Leave white space, or blank space, in your notes, especially when you are not understanding something. This allows you to go back at a later time and fill in clarifying information.
- ✓ Copy all the steps down for a problem, even if you don't understand the steps. This is especially important when working word problems.
- ✓ Create useful abbreviations you can use whenever possible to save yourself some time. If in a lecture environment, using abbreviations saves you time that you can spend listening to explanations.
- ✓ If you are in a lecture class and you get confused, don't stop writing!
- ✓ When your instructor gives you a verbal clue as to the importance of information, make sure you document that in your notes. Generally, that means you may get tested on that information.
- ✓ When you have new vocabulary introduced, make a special effort to highlight it. Better yet, make yourself a glossary of math vocabulary. Math teachers use the vocabulary of their discipline and if you don't know what the word means, you will lose out on the concept being explained. Math is like learning a foreign language. If you don't know the vocabulary, you can't possibly learn to speak the language!
- ✓ Use color in your notes to it easier to find key information.

- ✓ Use pictures or diagrams when possible. This is especially useful when solving applied problems. Drawing your own diagrams or pictures helps you make sense of the information and connecting ideas to processes.
- ✓ Use a three-ring binder, with dividers, instead of a spiral notebook. Using a binder as opposed to spirals may be more cumbersome but the binder allows you to organize information much better. You can keep your notes according to chapter and you have the flexibility of adding notes or other information where you need to in order to make your notes more comprehensive.
- ✓ Use only one side of the paper. By using only one side of the paper, you can spread your notes out and see them side by side, which is helpful when you begin to prepare for exams.
- ✓ Keep your own thoughts separate from information that is being imparted to you through lecture or video. If you have a question or an observation, make sure you indicate that it is such. You don't want to mistake your own idea for that of the instructor or the book.
- ✓ Develop an "I am lost" symbol for your notes that you will use when you become confused. And then make sure you leave blank space in your notes so you can add to them later once you have resolved your confusion.
- ✓ Be careful with recording lectures and make sure you are also listening while you are recording! You don't want to waste class time daydreaming, just because you are recording the lecture! Also, listening to recorded lectures later on will take more time, so use recordings as back up to your notes.
- ✓ Be careful with using screen shots, too, if taking notes in a math lab setting. Though it might be easier to print off screen shots of pages, you are losing the benefit of encoding the information and making the attempt to store the information in long-term memory. Listening, writing, and speaking are all ways to help you learn and understand the information and encode that information for later retrieval.

ASSIGNMENT: For the next two math classes, use the Column Method for taking notes in your math class. Make copies of these notes and include the copies in your portfolio. Keep your original notes in your math class binder. Be prepared to show your instructor your note-taking attempts.

Before each math class:

- Prepare several sheets of loose leaf notebook paper by drawing the vertical lines to create the requisite number of columns depending on whether you want to try the 2 or 3 – column method. Maybe you'd like to try both, so feel free to do so.
- Make sure you include a space at the top of each page for topic, section, and date.
- Make sure you include a space at the bottom of each page for questions.