Steps for Success in Math

Understanding Versus Memorizing
All too often, we will try to memorize a procedure or sequence of steps instead of looking to understand why certain steps are required in a procedure. Always, always strive for understanding the "why" & not just the "how." Review your notes after class and write in steps to explain the process of each example.

Math is Not a Spectator Sport, Get Active!
Math will often put you out of the comfort zone. Don't worry as this is normal and part of the learning process. Take notes and do your homework with your brain actively engaged. Look for patterns and connections with things you've already learned. The more connections you can make, the greater your understanding will be.

Practice, Practice, Practice
Do as many problems as is required to ensure you understand the concept. You will want to practice a concept until it makes sense and until you are fluent at finding solutions to various problems. Strive for those 'Aha!' moments. When you can get seven varied questions in a row right, you're probably to the point of understanding. Even more so if you re-visit the questions a few weeks or months later and are still capable of solving them. This is key to understanding.

Questions to ask yourself while doing your homework:

- What observations do you make about...?
- What do you notice when...?
- What patterns do you find in...?
- What ideas that we have learned before were useful in solving this problem?
- What are some other problems that are similar to this one?
- How does this relate to...?
- In what ways does this problem connect to other mathematical concepts?

MP7: Look for and make use of structure.

Be an Active Learner!

Study the Directions
As you take notes in class and do your homework pay careful attention to what the directions are asking you to do. Notice what the given info looks like and what type of answer to expect. As you study for tests, study the directions and first step as well as being familiar with what the outcome will look like.

Explain and Question
Explain to somebody else how you solve problems and apply math concepts. Teach a friend or write a summary. Question problems. Ask yourself, "What would happen if..." "I solved it this way because..."
We REMEMBER:
10% of what we READ, 20% of what we HEAR, 30% of what we SEE
50% of what we SEE and HEAR, 70% of what is DISCUSSED with OTHERS
80% of what is EXPERIENCED PERSONALLY
95% of what we TEACH TO SOMEONE ELSE

<modified from an article by Deb Russell, math.about.com >