Using Note Cards to Learn Mathematics

Learning mathematics is similar to being a proficient athlete. A person must practice and practice, over and over, to improve skills in a sport, even after a particular skill has been mastered.

Practice reduces careless mistakes, increases understanding, speeds solutions on exams and quizzes, and builds confidence in one's ability to do math regardless of past performance.

What Should I Put On My Note Cards?

- Sample problems and notes, demonstrated in class that will assist you when you go to do your assignment.

- Vocabulary and definitions discussed in class and in the text.

- Problems that you have missed on previous homework assignments, tests, or quizzes.

- Written procedures of how to execute each step of all problems.

The Note Card Method for Math Problems

1. Purchase note cards that are spiral-bound or kept in a mini-binder to prevent loss. These cards may be 3" x 5", 4" x 6", or 5" x 8" in size depending on the amount of material to be recorded and the size of your handwriting.

2. Place a problem on the note card. Solutions should be provided ***step-by-step***. Having step-by-step solutions speeds understanding and learning.

3. Write a narrative or **verbal description of what is done in _each_ step**.

4. Practice similar problems from homework. Refer back to your note cards if you are unable to solve these problems.

5. Practice the problems on your note cards. Read out loud the vocabulary and definitions.

    The more often you read through and practice the problems on your note cards, the more likely the information will move from short-term memory toward long-term memory; that is, become learned.

Advantages of Note Cards

- Note cards are **easily portable** in a pocket or purse, making them convenient to practice during short, once wasted, periods of time such as riding to and from school (while stopped at lights), between classes, during meals, etc.

- Note cards are a fast way to practice, review, and **reduce overall study time**.

- Placing problems on note cards and practicing setting up solutions, step-by-step, makes it easier to remember what was just covered and increases recall for exams and quizzes.

- Constant reading and rereading of note cards moves information into long-term memory, including important terminology and definitions.

Models of Well-Organized Note Cards

Solve $x^2 + 5x + 5 = -1$ for x	
1. $x^2 + 5x + 6 = 0$	Add 1 to both sides of eqtn
2. $(x + 3)(x + 2) = 0$	Factor into binomials
3. $x + 3 = 0$ or $x + 2 = 0$	Set each factor equal to 0
4. $x = -3$ or $x = -2$	Solve
	Check the solutions in the original equation

Identify the graph from the equation

$y = 4x + 3$	line	
$y = |2x|$	"V"	
$y = 2x^2$	parabola	
$y = x^3$	"s" curve	

It is a good idea to select several examples for *each type of problem* that could appear on an exam and place them on note cards.

After an exam or quiz, make a note card for each problem missed. This will help you in preparation for future exams or the final exam.