Quantitative Learning: Math and Science
Uses of Math and Science in Life

- Arithmetic
  - Keeping your checkbook.
  - Figuring a tip at a restaurant.
  - Doing your income tax returns.

- Algebra
  - Calculating interest on a loan.
  - Computing your GPA.
Geometry
- Deciding how much paint or carpeting to buy.
- Deciding how much fencing you need to enclose your yard.
- Deciding if and how your new furniture will fit into your room.

Probability and Statistics
- Understanding health risks.
- Understanding and making business decisions.
Calculus and Differential Equations
- Needed for engineering, business, economics, physics, astronomy.
- Used for problems that involve work, water pressure, etc.

Sciences
- Help in understanding yourself and the world you live in.
Facts about college math and science courses:

- Assignments are crucial.
- Class time may focus more on theories and ideas than on problem-solving.
- Class size may be larger.
- Knowledge of technology may be important.
Effective Use of Math and Science Textbooks Involves:

- Recognizing that material is presented sequentially.
- Taking notes, working examples yourself, identifying things you don’t understand.
- Paying attention to formulas.
- Using memory techniques, especially in learning new vocabulary.
- Learning the language of the discipline.
- Keeping up with reading and homework.
Studying and Homework

- Review materials regularly and often.
- Do problems, problems, more problems.
- Don’t let frustration stop you.
- Work with a partner or study group.
- Use what you know about your learning styles.
Steps in Solving *Word Problems*

1. Read the problem carefully and understand what it is asking.
2. Relate to problems you have done and identify possible solutions.
3. Pick a way to solve the problem and do it.
4. Review your results.
PROBLEM-SOLVING STRATEGIES

- Look for a pattern.
- Make a table.
- Break into smaller parts.
- Check a similar problem.
- Work backwards.
- Draw a table/diagram.
- Translate words into an equation.
OVERCOMING MATH ANXIETY

- Practice, practice, practice.
- Use resources.
- Take responsibility.
- Learn and use relaxation techniques.
- Adopt a positive attitude.
Math and Science Test-Taking Tips

- Read through the entire exam first.
- Analyze problems carefully.
- Estimate an approximate answer before working the problem.
- Break solution into smallest possible steps.
- Draw a picture to help you see the problem.
- Be neat.
- Use the opposite operation to check your work.
- Look back at the question to be sure you followed directions.
Visual Aids

- Provide a lot of information in an easy to understand form in a relatively small amount of space.
- Show trends over time.
- Show relative rankings.
- Show distributions.
- Show cycles.
TYPES OF VISUALS

- Tables.
- Pie charts.
- Bar graphs.
- Line graphs.
- Diagrams.