“Helping Students with Math Anxiety”
Resources: Overcoming Math Anxiety by Sheila Tobias, and Banishing Math Anxiety by Sheila Tobias and Victor Piercey

COMMON MYTHS -- often become excuses to fail

- Myth 1: Mathematical ability is inherent. (either good in English or good in math and science but not both)
- Myth 2: Mathematical insight comes instantly if it comes at all.
- Myth 3: Only the very few can do mathematics.
- Myth 4: Mathematics is a male domain.

RESEARCH SAYS

- Hundreds of studies have found that perceived incompetence is actually a result of believing these myths.
- Often anxiety, rather than incompetence, controls students’ academic choices.
- “As long as parents, teachers, athletes, and entertainers publicly indulge in fear or indifference to mathematics, and as long as people who succeed in mathematics claim an innate superiority over people who don’t, the myths surrounding mathematics and the math anxiety that is a consequence of these myths will probably not go away.”

TO BE SUCCESSFUL IN MATH

- Confidence
- Persistence
- A taste for hard work
- “Math Mental Health – the willingness to learn the math you need when you need it.”

Perhaps math anxiety is more about a failure of nerve rather than a failure of intellect.

MANAGING MATH ANXIETY

- Take charge of math learning.
- Talk about math. (heart of treatment)
- Stop being intimidated by lack of confidence.
- Stop being intimidated by “hallowed traditions” of math classrooms that keep students from feeling good.

ACTIVE THINKING

- Thinking in mathematics involves doing.
- Teachers can’t teach math without DOING math on the board.
- They know something: only by trying new paths of thought, putting down one idea and then another, drawing diagrams, doing calculations, checking and rechecking can one learn math and solve problems.

SELF MONITORING

- Recognize when panic starts.
- Know what form it takes.
- Un-panic systematically.

THE SECRET -- The essence of doing math is not to stop but to keep going. The essence of math anxiety therapy is self-monitoring.
SELF-MASTERY

- Writing things down prevents almost paralyzing effort of staring at a problem or page in a book.
- Remember: Thinking in mathematics involves doing.
- Students who are successful in math or not necessarily smarter than the rest of us, but they know themselves well.

USE RESOURCES

- Instructor -- Visit in office within first two weeks; introduce self; go back often; Establish relationship; Have an agenda/plan/specific question
- Classmates -- fellow travelers on journey
- Form study groups
- Tutors
- Textbook -- Reading a math text is unlike reading other textbooks. Read slowly. Read summaries at the end of each section or chapter. Study everything on the page. Do not skim or skip diagrams or graphs. Read and study examples. Write/mark in the book.

WHEN HAS ONE STUDIED ENOUGH?

- Good sign: When working problems, getting right answers often and understanding what is wrong with those missed
- Confident? Alert?
- Review. Does it look easy?

IF STUDYING ISN’T DOING WELL...DIAGNOSE THE PROBLEM

- Understand material as written? Try reading up.
- Think understand but can’t work problems? Review guidelines and ask for help. Take work done.
- Read, comprehend, do homework, but can’t put it all together for test? Get with a study group!

TOOLS OF THE TRADE

- Don’t give up!
- Know how to use calculator. Go to help sessions or ask instructor.
- Use online tools.
- To prepare for tests, work problems without getting immediate feedback as to right or wrong.
- Work problems, re-work problems, and work again. PRACTICE! PRACTICE!

STUDY GROUPS

- “Studying in a group is the most effective way to learn and retain what you’ve learned.”
- Find or form a study group, people who will work well together and respect each other.
- Set a regular meeting time.
- Start early in the semester.
- Establish ground rules.