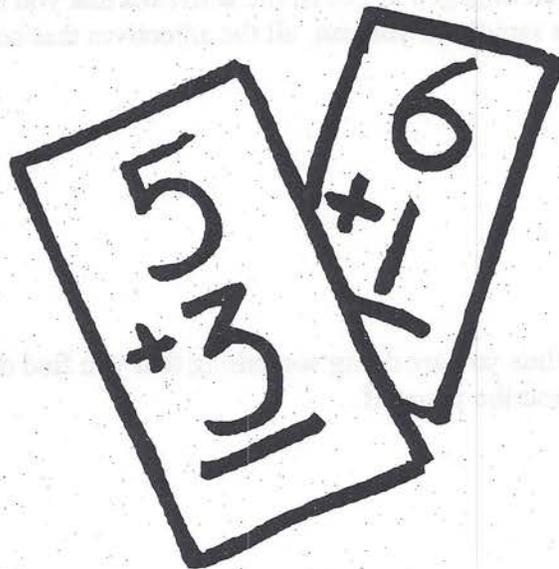


**Caring Enough
To
Prevent Or Alleviate
The
Fear of _____
(Math)**



ATTITUDES TOWARDS MATHEMATICS

List below several activities that you do easily and well:

List several activities that you find hard to do:

Close your eyes and visualize yourself engaged in one of the activities that you do well. How does it feel? How do you see yourself? Write, as rapidly as you can, all the adjectives that come to your mind. (You can open your eyes now....)

Now visualize yourself as you are when you are doing something that you find difficult. Again, write all the adjectives that you can think of to describe yourself.

Review both lists of adjectives. What differences do you find?

YOUR FEELINGS ABOUT MATHEMATICS

By Marilyn N. Suydam and Cecil R. Trueblood
The Pennsylvania State University

This is to find out how you feel about mathematics. You are to read each statement carefully and decide how you feel about it. Then indicate your feeling on the answer sheet by marking:

- A - if you strongly agree
- B - if you agree
- C - if your feeling is neutral
- D - if you disagree
- E - if you strongly agree

1. Mathematics often makes me feel angry.
2. I usually feel happy when doing mathematics problems.
3. I think my mind works well when doing mathematics problems.
4. When I can't figure out a problem, I feel as though I am lost in a mass of words and numbers and can't find my way out.
5. I avoid mathematics because I am not very good with numbers.
6. Mathematics is an interesting subject.
7. My mind goes blank and I am unable to think clearly when working mathematics problems.
8. I feel sure of myself when doing mathematics.
9. I sometimes feel like running away from my mathematics problems.
10. When I hear the word mathematics, I have a feeling of dislike.
11. I am afraid of mathematics.
12. Mathematics is fun.
13. I like anything with numbers in it.
14. Mathematics problems often scare me.
15. I usually feel calm when doing mathematics problems.
16. I feel good toward mathematics.
17. Mathematics tests always seem difficult.
18. I think about mathematics problems make me nervous.
19. Trying to work mathematics problems make me nervous.
20. I have always liked mathematics.
21. I would rather do anything else than do mathematics.
22. Mathematics is easy for me.
23. I dread mathematics.
24. I feel especially capable when doing mathematics problems.
25. Mathematics class make me look for ways of using mathematics to solve problems.
26. Time drags in a mathematics lesson.

WHAT ABOUT MATH?

Finish the following sentences in a few words or paragraphs and then look over the picture you have drawn of your attitude toward yourself and toward mathematics.

1. When I got bad grades in math _____
2. My father felt that math was _____
3. When it was time for math in grade school I _____
4. My ability to do math is _____
5. My grade school math teachers _____
6. When it comes to math men are _____
7. My mother felt that math was _____
8. My background in math is _____
9. Doing math makes me feel _____
10. People who are good at math _____
11. When it comes to math women are _____
12. My most positive experience with math was when _____

13. I haven't done math since _____
14. If I were better at math I would _____
15. My most negative experience with math was when _____

16. When I hear someone say "math is fun" I _____

17. Male mathematicians are _____
18. I am anxious about math because _____

MIND OVER MATH

Please read each statement and decide whether it is TRUE or FALSE. Mark T or F in the blank provided.

- ___ 1. Men are better in math than women.
- ___ 2. Math requires logic, not intuition.
- ___ 3. You must always know how you go the answer.
- ___ 4. Math is not creative.
- ___ 5. There is a best way to do a math problem.
- ___ 6. It's always important to get the answer exactly right.
- ___ 7. It's bad to count on your fingers.
- ___ 8. Mathematicians do problems quickly, in their heads.
- ___ 9. Math requires a good memory.
- ___ 10. Math is done by working intensely until the problem is solved.
- ___ 11. Some people have a "Math Mind" and some don't.
- ___ 12. There is a magic key to doing math.

MATH ANXIETY BILL OF RIGHTS

By Sandra L. Davis

- I have the right to learn at my own pace and not feel put down or stupid if I'm slower than someone else.
- I have the right to ask whatever questions I have.
- I have the right to need extra help.
- I have the right to ask a teacher or TA for help.
- I have the right to say I don't understand.
- I have the right not to understand.
- I have the right to feel good about myself regardless of my abilities in math.
- I have the right not to base my self-worth on my math skills.
- I have the right to view myself as capable of learning math.
- I have the right to evaluate my math instructors and how they teach.
- I have the right to relax.
- I have the right to be treated as a competent adult.
- I have the right to dislike math.
- I have the right to define success in my own terms.

SELF TALK

By Bonnie Donady and Susan B. Auslander

When you notice that you are berating yourself with defeating self talk try to replace it with encouraging self talk.

IF YOU CAN'T GET THE PROBLEM "INSTANTLY" I.....

quit
feel dumb
put holes in the paper

ask for help
try another task and return to the problem later

WHEN I HAVE TO ADD A STRING OF NUMBERS OR FIGURE OUT A PERCENT, I....

panic
say, "why can't I be like
my smart boss"

review similar materials in a book I understand
try to figure out a new way that will serve me in the future

WHEN I HAVE TO MAKE UP THE NEW BUDGET, I....

do it in a harder way
than necessary
spend a long time on it

do it in a way that I feel comfortable
take as much time as I need

DOING MATH MAKES ME FEEL....

bored
intimidated
powerless

intrigued
good about myself
smart

IF I CAN DO A TASK INVOLVING MATH, I SAY TO MYSELF....

this must be an easy one
this isn't real math

this is fun
that's great, I'm making progress

STUDYING MATHEMATICS

I. Takes notes on

1. New terms and their meanings
2. New symbols and what they mean
3. Definitions
4. General principles that determine the kind of problem or what are appropriate procedures.
5. Examples with specific detailed procedures needed to work a problem.

If you do not understand something, ask the instructor. Add the instructor's answers to your notes.

All material verbally stressed by the instructor either by repetition or by way of a summary should be put in the notes.

II. Review the notes and read the textbook before attempting the assigned problems.

1. Realize that math must be read slowly and carefully and sometimes many times.
2. Read with a pencil and paper working through examples in the notes and in the textbook.
3. If you cannot figure it out, mark it and get help.
4. Think about the problems done, comparing and contrasting the different procedures used--REFLECT.
5. Read the directions carefully so that you will remember what directions might say later on a test. Think of other ways the directions for the same type of problems might be worded.

III. Work the assigned problems.

1. Work some problems every day as well as study some every day. Do not wait two days to do some math.
2. Write the problems carefully and clearly, checking to make sure that you copied each correctly.
3. First try a few problems that have answers. Talk your way through the problems not doing anything that you do not have a reason for doing (some rule or definition in the course). If you cannot find a rule or definition to back up something that you are doing, it is best not to do something. You will probably be making up your own rule which does not exist in the course (Student rules are way more numerous than course rules).
4. Check to make sure the problems are correct. If they are not correct, check your work and review your notes and the textbook.
5. If you still have trouble, mark the problem so you can go back to it later. Be positive. The next problem might give you insight into the trouble.
6. Realize not all problems are solved immediately. Take a break, try again on a different sheet of paper. If you do not get it after spending quite a bit of time on it, wait, and ask the teacher about that one.
7. Take a 10 minute break about every 45 minutes.

IV. Studying for Tests

1. This studying should be a daily habit. You are asking too much of yourself to learn that much material just the night before a test.
 2. Review your notes and textbook (concentrate on the rules and definitions).
 3. Think about the various kinds of problems, compare and contrast, and organize working problems.
 4. Practice working problems.
 5. Make drill cards and use them to help memorize rules, definitions, and symbols.
 6. Take a practice test under the exact conditions as at school (timed, not looking back in the text, not looking for answers).
 7. Get a good night's sleep the night before a test.
- Remember most good college math students start studying for a math test one week before the test. Anxiety gets replaced by confidence because the knowledge base is there.
 - A good night's sleep helps the psychomotor.
 - Knowledge help the intellect.
 - Positive self-talk and confidence help the affective needs.

V. Taking Quizzes and Tests

1. Jot notes, formulas or rules on your paper to use later (just do not spend too much time doing it).
2. Read and follow directions.
 - a. If the directions say do 2 out of 3, then do only 2.
 - b. If the directions state to round the answers to 2 decimal places, then round answers off to 2 decimal places.
3. Do not spend too long on a problem.
4. Do all calculations on your paper to the side of the problem, not on scratch paper.
5. Show all your work if you want part credit.
6. Check your work. Is your answer reasonable?
7. Practice positive self-talk.
8. Take some deep breaths when needed.

VI. Some general rules about studying math

1. NEVER GET BEHIND IN MATHEMATICS.
2. STUDY 2 to 3 HOURS FOR EVERY HOUR IN CLASS. WORK AND WORK HARD.
3. Keep old tests corrected in a notebook for review before each later test and before the exam.

SUCCEEDING WITH MATH

1. Realize that your math anxiety is not unique. Almost everyone has a certain degree of math anxiety.
2. Know what math is and what it isn't.
 - Many persons believe that math requires no studying-you either get it or you don't. However, to develop skill in math requires practice.
 - Many believe that doing math means doing it quickly. For most people, including mathematicians, certain concepts are understood only after much study.
3. Be relaxed and set up a reasonable schedule for math work.
 - Don't attempt to do math if you're already tired, tense, or anxious about other things.
 - Math requires concentration at least for short periods. Try to set up a study area away from family members.
4. Write a math autobiography so that you can begin to determine when and where your trouble started.
5. Do not try to do too much too soon.
 - Realize that doing math correctly takes time.
 - Speed reading is usually not helpful - read slowly and carefully so that no significant word or symbol is overlooked.
6. Enlist the help of others.
 - Ask for help but don't let the person do the problems for you.
 - Try to explain concepts to others.
7. Try to find a method that works best for you.

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