

Defining Math Anxiety

Math anxiety is a state of panic, helplessness, paralysis and mental disorganization that occurs in some students when required to solve math problems. This discomfort varies in intensity and is the outcome of numerous previous situations. (Tobias, 1986)

The Physiology of Math Anxiety

Hypothalamus releases corticotropin-releasing factor, which initiates the release of adrenocorticotrophic hormone from the anterior pituitary gland, which initiates release of epinephrine, norepinephrine, and cortisol by the adrenal glands. Respiratory rate increase, pupils dilate, sight sharpens, blood is shunted away from digestive tract and directed to muscles and limb, perception of pain diminishes, awareness intensifies, impulses quicken, search and scan the environment.

The Causes of Test Anxiety

Expectations of parents, teachers, or other significant people in the student's life associating grades with a student's personal worth being embarrassed by the teacher or other students when trying to do math problems, timed tests and the fear of not finishing the test, even if one can do all the problems being put in math courses above one's level of competence

Relaxation Techniques

The Tensing and Differential Relaxation Method

1. Put your feet flat on the floor.
2. With your hands, grab underneath the chair.
3. Push down with your feet and pull up on your chair at the same time for about five seconds.
4. Relax for five to ten seconds.
5. Repeat the procedure two or three times.
6. Relax all your muscles.

The Palming Method

1. Close and cover your eyes using the center of the palms of your hands.
2. Prevent your hands from touching your eyes by resting the lower parts of your palms on your cheekbones and placing your fingers on your forehead. Your eyeballs must not be touched, rubbed or handled in any way.
3. Think of some real or imaginary relaxing scene. Mentally visualize this scene. Picture the scene as if you were actually there, looking through your own eyes.
4. Visualize this relaxing scene for one to two minutes.

Deep Breathing

1. Sit straight up in your chair in a good posture position.
2. Slowly inhale through your nose.
3. As you inhale, first fill the lower section of your lungs and work your way up to the upper part of your lungs.
4. Hold your breath for a few seconds.
5. Exhale slowly through your mouth.
6. Wait a few seconds and repeat the cycle.