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Steven R. Lay* (slay@leeuniversity.edu), Dept. of Natural Sciences and Mathematics, Lee University, P. O. Box 3450, Cleveland, TN 37320. *Reducing Math Anxiety by Improving the Math.*

Why do students fear math? We believe the primary reason is that they don't understand it. We have found that improving the way we explain basic arithmetic operations improves students' understanding and reduces their anxiety. Our approach involves developing a dynamic model for arithmetic where the emphasis is on an operator changing one number into another number. For example, the number 3 is changed into the sum $3 + 5$ by the operator $+ 5$ (an increase of five). This operator approach corresponds closely to the way math is used in applications and simplifies definitions that are often troublesome to students. It also develops a way of viewing compound expressions that reduces common cancellation errors in algebra. This approach has been used successfully for many years in a remedial course in beginning algebra. The results of long term studies of student progress will be presented. (Received September 13, 2005)