

**Meeting:** 1003, Atlanta, Georgia, MAA CP B1, MAA Session on My Favorite Demo: Innovative Strategies for Mathematics Instructors, I

1003-B1-369            **Kathleen D. Lopez\*** (klopez@louisiana.edu), Department of Mathematics, P. O. Box 41010, Lafayette, LA 70504. *My Secret Function: A Class Activity for Teaching Operations on Functions.*

The presenter created this activity to help students overcome two hurdles when learning to perform operations on functions - whether the function is represented symbolically, numerically, or graphically. Prior to using this activity, students had a difficult time learning how to perform the arithmetic operations on functions. They needed to be convinced that only the method of obtaining the function values changes with the representation. In this activity, each student is given "a secret function". The students take turns finding function values and announcing them to the others so all that remains is for the class to perform the indicated operation. The second hurdle is the tendency of the students to confuse composition with multiplication. This activity emphasizes the point that, when composing two functions, the output of the first is used as the input for the second. Rather than having two students working independently to compute function values as for the first four operations, for composition the second student must wait for the first student's result before he can begin his calculations. In addition, the use of a variety of functions allows this activity to serve as a review for some prerequisite mathematics. (Received September 13, 2004)