1014-05-1601 **Daniel Schaal*** (daniel.schaal@sdstate.edu), Dept. of Mathematics and Statistics, South Dakota State University, Brookings, SD 57006, and **Donna Flint** and **Joseph Mousel**. *Rado Numbers for Some Linear Equations.*

In 1916, I. Schur proved the following theorem. For every integer t greater than or equal to 2, there exists a least integer n = S(t) such that for every coloring of the integers in the set 1, 2, ... , n with t colors there exists a monochromatic solution to x + y = z. The integers S(t) are called Schur numbers and are known only for t = 2, t = 3 and t = 4. R. Rado, who was a student of Schur, found necessary and sufficient conditions to determine if an arbitrary linear equation admits a monochromatic solution for every coloring of the natural numbers with a finite number of colors. Let L represent a linear equation and let t be an integer greater than or equal to 2. The least integer n, provided that it exists, such that for every coloring of the integers in the set 1, 2, ... , n with t colors there exists a monochromatic solution to L is called the t-color Rado number for L. If such an integer n does not exist, then the t-color Rado number for L is infinite. In this talk we present the exact Rado number for some particular equations that have recently been determined. We will also discuss some upper and lower bounds for Rado numbers. (Received September 28, 2005)