Dusty E. Sabo* (sabo@sou.edu), Southern Oregon University, Mathematics Department, 1250 Siskiyou Blvd., Ashland, OR 97520, and Daniel Schaal and Jacent Tokaz. Disjunctive Rado Numbers for a pair of Schur Like Equations.
Issai Schur established the following in 1916. For every integer $t$ greater than or equal to two, there exists a least integer $\mathrm{n}=\mathrm{S}(\mathrm{t})$ such that for every coloring of the integers in the set $\{1,2, \ldots, n\}$ with t colors there exists a monochromatic solution to $x_{1}+x_{2}=x_{3}$. The integers $\mathrm{S}(\mathrm{t})$ are called Schur numbers. Around 1933 Richard Rado found a test to determine for which linear equations a similar statement would be true. Recently a related idea called a disjunctive Rado number has been defined. Suppose we are given two equations $E_{1}$ and $E_{2}$, the disjunctive 2-color Rado number for $E_{1}$ and $E_{2}$ is the least integer n , provided it exists, such that for every coloring of the set $\{1,2, \ldots, n\}$ with two colors there exists a monochromatic solution to either $E_{1}$ or $E_{2}$. Let $E_{1}$ be the equation $x_{1}+x_{2}+c=x_{3}$. and let $E_{2}$ be the equation $x_{1}+x_{2}+k=x_{3}$, where c , k are natural numbers and $\mathrm{c} \leq \mathrm{k}$. Let $\mathrm{R}(\mathrm{c}, \mathrm{k})$ represent the disjunctive 2-color Rado number for $E_{1}$ and $E_{2}$. In this talk we will explore a few of the methods we used to obtain $\mathrm{R}(\mathrm{c}, \mathrm{k})$ for all natural numbers $\mathrm{c}, \mathrm{k}$ with $\mathrm{c} \leq \mathrm{k}$. (Received September 25, 2006)

