1056-05-485   **Jonelle Hook*** (`jmh5@lehigh.edu`), Christmas-Saucon Hall, 14 E. Packer Ave., Bethlehem, PA 18015. *Star-Avoiding Ramsey Numbers.*

The (graph) Ramsey number $R(G, H)$ is the smallest integer n such that every 2-coloring of the edges of K_n contains either a red copy of G or a blue copy of H and there exists a *critical 2-coloring* of K_{n-1} that does not contain a red copy of G or a blue copy of H. What is the largest star $K_{1,k}$ that can be removed from K_n so that the underlying graph is still forced to have either a red copy of G or a blue copy of H? That is, determine the largest integer k such that every 2-coloring of $K_n - K_{1,k}$ has either a red G or a blue H and there exists a 2-coloring of $K_n - K_{1,k+1}$ without a red G or a blue H. We have determined this integer for various classes of graphs G and H where $R(G, H)$ is known. For these Ramsey numbers, we have also classified the critical 2-colorings. (Received September 09, 2009)