

Meeting: 1003, Atlanta, Georgia, SS 24A, AMS Special Session on Design Theory and Graph Theory, I

1003-06-607 **Avery S Zoch*** (azoch@hou.devry.edu), 2804 Cetti, Houston, TX 77009. *Pascal's Grey Scale.*

We find a way to relate Pascal's Triangle to color theory. Accomplished by constructing the sets of polynomial rings in two given indeterminants which are representing distinct colors as the free variables. Assigning elements of these sets of polynomials to the numbers in Pascal's triangle in a meaningful way so as to follow the arity of the formation of new colors that are produced by partitive mixing of a primary color with two achromatic sequences or grey sequences at direct even proportions. Grey sequences are produced as sequences of set theoretic free real variables representing the achromatic colors between black and white or total value and no value. A chromatic color distinct to a colorimeter from the achromatic colors used in the grey sequences is selected and elements from the polynomial ring in the indeterminants which represent these colors are identified with the entries in the triangle of Blaise Pascal which is embedded in a continuum here defined as the grid of Pascal. This grid of Pascal holds all the hue names from partitive color mixture (at proportions of one half) between any of the colors of the grey sequence with the chromatic primary color selected. This construction then also exhibits all arity relationships from partitive color mixture. (Received September 24, 2004)