

Problem 2

Starting with 5 colors, say red, white, blue, yellow, and green, how many ways can the corners (vertices) of a square be colored? Note a vertex is dimensionless so that it can't actually be "colored". It is more proper to say we are assigning colors to the vertices. Assume that reflections and rotations are allowed. (This means that if you examine a square from front or back it represents the same coloring). Also assume that no vertex is left uncolored. Show your work on this problem.