

Problem Competition

December 8, 2005

Starting with 4 colors, say red, white, blue, and green, how many ways can the corners (vertices) of an equilateral **triangle** be colored? You can rotate the circle, look at it from the other side, flip it over, et cetera, without generating a new coloring! In other words, the three colorings

are the same.

Now that you've warmed up, how many ways are there to color the corners of a **square** red, white, blue, or green?

Return your solution, showing your work, to Kevin O'Bryant in Room 202 (building 1S). Each month, the best solution will receive a modest reward, and all correct solutions will be acknowledged.