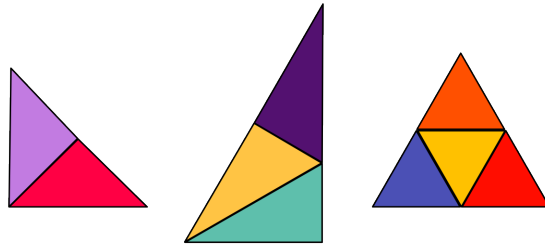# Math Challenge Problem

for late September, 2014

Self-Similar Divisions

Any triangle can be divided into smaller triangles, but only sometimes are those smaller triangles all congruent to each other and also similar to the original triangle. Three such divisions are shown above, illustrating that it is possible to find triangles which can be divided into 2, 3 or 4 similar triangles. Are there others? Is there a triangle which can be divided into more than 4 similar triangles?

The Challenge: Find as many different triangles with this property, giving the division for each.

The winner this month will be the person who finds the most triangles, or in case of a tie, gives the best proof that no more such triangles exist.

Submit solutions to Ross 2239G or oscar.levin@unco.edu by **Tuesday, September 30**.

The best solution will be announced at the following Math Club (Wednesdays at 4:30) and
WIN A PRIZE!
Prizes include nifty Rubik's style puzzle cubes, math puzzle books, math games, even a
math coloring book. So submit your answer TODAY!