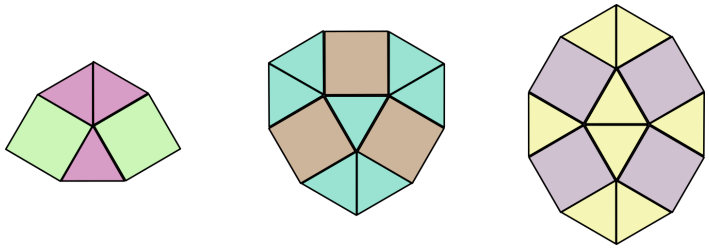
MATH CHALLENGE PROBLEM

for late October 2015

Gardner's Gardens



The following is based on a Martin Gardner puzzle from his column in Scientific American.

Suppose you wanted to plant a garden in the shape of a convex polygon made up of contiguous flower patches. Each patch will be in the shape of a square or an equilateral triangle, all with side length 1 meter. Three layouts are shown above, demonstrating that it is possible to create such a garden with 7, 9 or 10 sides. It is not hard to find gardens with number of sides ranging from 3 to 10. Are more sides possible?

The Challenge: Is there a convex polygon made entirely out of squares and equilateral triangles with 11 sides? What is the largest number of sides possible?

Submit solutions to Ross 2239G or `oscar.levin@unco.edu` by **Friday, October 30**.

The best solution 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!