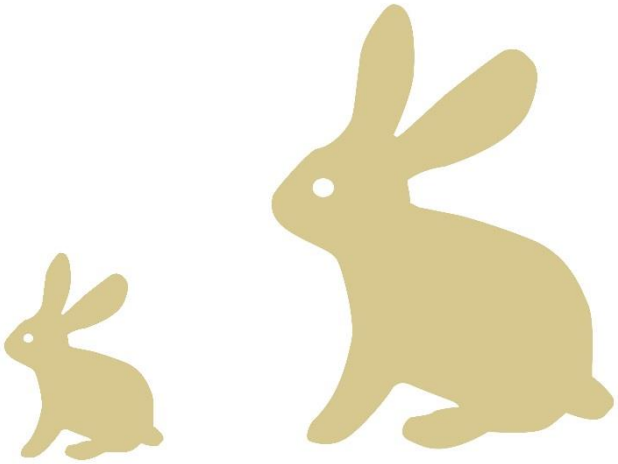
# CS3570 Introduction to Multimedia

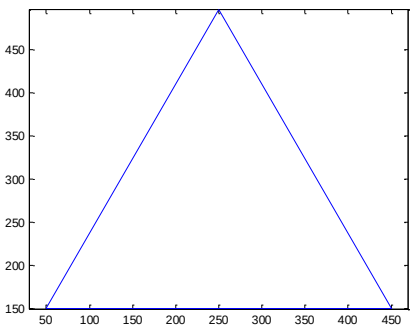
**Homework #4**

Due: 5/28 11:59pm, 2014

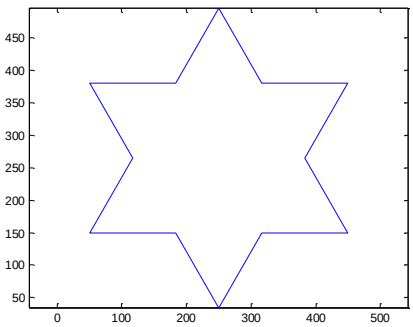
1. (a) Write a function to create a vector graphic object from a set of sampled points (Points.txt). Given a set of control points sampled from the contour of the following object, compute the cube Bézier curves (4 points a group) from these sampled points to form the object shape. Show the results of the recovered object shapes on an image grid.
   (b) Write a function that can scale an object shape formed by cube Bézier curves and NN interpolation (implemented in HW1). Show the results of scaling the recovered object shapes in (a) by 4 times on an image grid. Discuss the results.



2. According to the following algorithm, make Koch's snowflakes of the given shape after 5 iterations.
   (a) divide each of the line segments into three sub-segments of equal length.
   (b) draw an equilateral triangle that has the middle sub-segment from step (a) as its base and points outward.
   (c) remove the line sub-segment that is the base of the triangle from step (b).
   (d) Return to step (a)




3 endpoints: (50, 150),
(450, 150),
(250, 150+200*sqrt(3))




at the first iteration