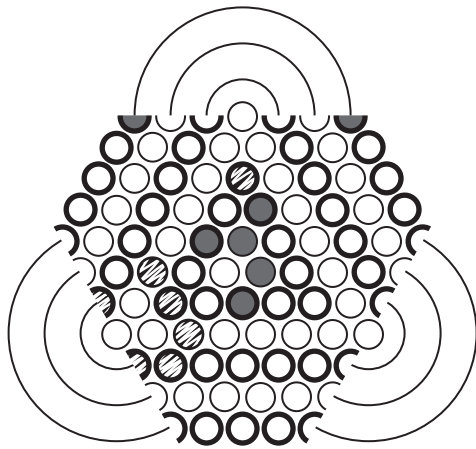# NET Y

Fig. 1 - Gray Wins Inner Y
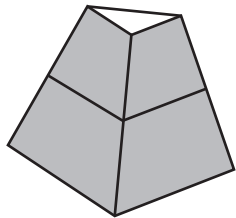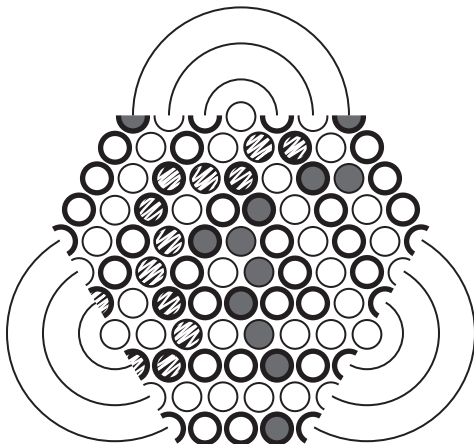

Fig. 2 - Nested Tetrahedrons

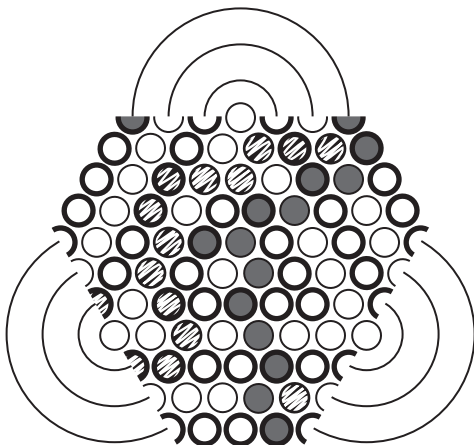**Fig. 3 - Scribble Wins Mid Y**

Fig. 4 - Gray Wins Outer Y

INTRODUCTION "Net Y" is an acronym for Nested Tetrahedrons Y. It is a two player game. A printed paper "board," a pen of one color, and a pen of another color can be used to play. The original game of Y was first described by Claude Shannon in the early 1950's, and independently reinvented around the same time by Craige Schensted and Charles Titus. Mark Steere created this variant of Y on March 31, 2006. In Net Y, there are three superimposed, interdependent instances of Y which are played simultaneously.

SETUP The board can be viewed as having three "arms" as shown in Figure 1, with arcs connecting the side edges of the arms. If the arms were folded out of the page and inward, the tetrahedral shape shown in Figure 2 would form. The tiny half circles along the side edges of the arms would come together as indicated by the arcs to form whole circles.

BASIC MOVES Normally two different color pens are used, such as red and blue - one for each player. Here one player will be Gray and the other Scribble. Players take turns coloring in circles on the (initially empty) board, one circle per turn, or two corresponding half circles in a turn.

THREE DIMENSIONAL PERSPECTIVE In three dimensions the board can be viewed as two nested tetrahedrons, each missing its top peak, having been severed by a horizontal cut. Each of the two tetrahedral shapes has a trianglular perimeter on top. These two shapes and a triangle are superimposed on one another. In two dimensions the top triangle becomes a broken triangle around the outer perimeter, the intermediate triangle becomes a broken triangle closer in, and the bottom triangle remains whole in the center of the board.

OBJECT OF THE GAME The three games of Y, each represented by its own highlighted triangle, are played simultaneously. The player who wins the majority of them wins overall. In each game of Y, players attempt to join the three sides of the given triangle with continuous linked paths of colored in circles (in the players' own designated colors). The sides must be connected by points **inside** the triangle (as viewed in two dimensions), including its highlighted perimeter.

In Figure 1 Gray has connected all three sides of the center triangle. Continuing the same game in Figure 3, Scribble has connected the three sides of the intermediate triangle. In Figure 4 Gray has claimed victory in the outermost triangle. Since Gray has won two of the three games of Y, Gray has won overall.

AUTHOR'S NOTE Feel free to copy, distribute, profit from, or do whatever you like with this document and the game of Net Y. However please don't change the name or the rules, and please attribute the game to me, Mark Steere. Other games I invented: Quadrature, Tanbo, Impasse, Byte, Diffusion, Cephalopod, and Box Hex. For more information see marksteeregames.com.