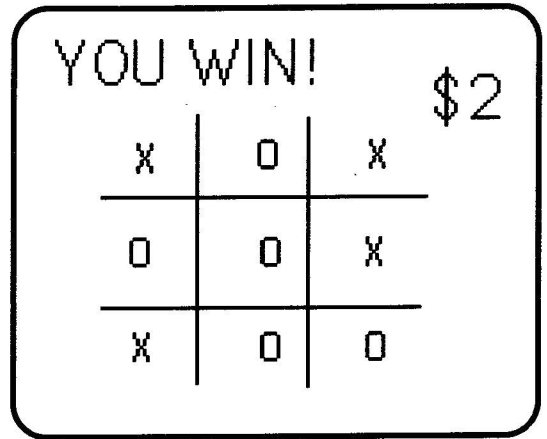# Lottery
by Bill Craig

These procedures simulate the current Virginia state Lottery. Squares on a tic tac toe board are uncovered. If 3 in a row are X's or O's the amount shown on the screen is won. Δ

Useful Procedures:

START	starts the simulation
TICKET	purchases a ticket
RESULTS	show running total

John Allen Paulos (author of Innumeracy) would like this activity because it shows how "impossible" it is to win anything significant in one of these state run lotteries!

Geo Shapes
by Ihor Charischak

This is a simple microworld that offers students an opportunity to use shapes in creating designs on the computer screen and on paper.

I ask the students to draw some pictures (fig. 1) using a set of procedures (below) which I demonstrate to them. What follows depends on their requests. Some of the questions that turned into problem solving activities were:

•I want to color my picture.
•I need some 6 sided shapes. What are they called?
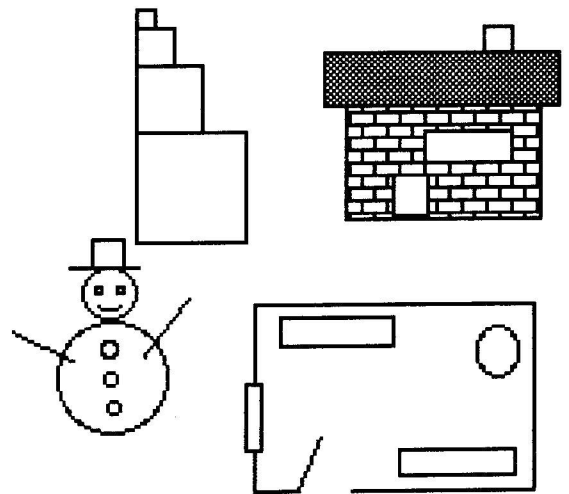•How do you draw a star?

fig. 1

•Can you make a circle and a square that are the same size? (What the student meant to ask was: How do I inscribe a square inside a circle? But I like the original question and I have asked it on occasion). Δ

Useful procedures:

SQUARE *length*	draws a square with sides equal to *length* turtle steps
TRIANGLE *length*	draws an equilateral triangle with sides equal to *length*
RECTANGLE *length width*	draws a rectangle with dimension *length* and *width*
CIRCLE *circumference*	draws a circle with a circumference of *circumference*
MOVE	allows user to move turtle with arrow keys