

Microcomputer Corner

by W. George Cathcart

"LOGO and Line Constructions"

1. Write a LOGO procedure that will draw a line of any length specified by the user.

Example: TO LINE :LEN

2. Use your line procedure along with any other necessary LOGO commands to construct

- a) two line segments, each 60 turtle steps long, which form an angle.



- b) a 50-step line segment that intersects an 80-step line segment.



- c) two 100-turtle-step parallel line segments, 40 steps apart.



- d) a 45-step line segment that is bisected by a 75-step segment but not perpendicular to the first.



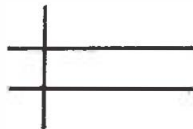
- e) a 40-step line segment that is a perpendicular bisector of an 80-step line segment.



- f) two 90-turtle-step parallel line segments, intersected (not at 90°) by a third line segment.



- g) two parallel line segments intersected perpendicularly by a third line segment.



3. Compare your procedures with the procedures designed by some of your friends.

Tryout

1. Of five pieces of paper, some pieces are torn into five smaller pieces. Some of these smaller pieces are further torn into five smaller pieces, and so on. Can this process produce exactly 1984 pieces of paper? How?

--Mark E. Saul, Association of Teachers of Mathematics, New York City

2. If Hildegard's age is multiplied by the age of her mother, the product is a permutation of the digits in their individual ages. How old are they? Why is the product of their ages an "interesting number"?

--Source unknown