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Playing the Game

Educational Objectives:

- 1) Students will develop an understanding of mathematical functions.
- 2) Students will learn to create Logo "functions" (reporter procedures) using Output.
- 3) Students will practice mental arithmetic.
- 4) The teacher can reinforce current mathematical functions by using those specific functions in the game.

Playing

Time:

Several Class Sessions

Setup:

Groups of 4-6 students should be assembled and one computer, complete with Logo, should be available per team.

Object of the Game:

To create a function sentence hard enough to stump your opponents, but easy enough for you to solve.

Procedure:

- 1) Each member of each group should write one or two Logo functions in the workspace of the common computer. The teacher may wish to dictate or contribute functions currently being studied to some or all groups.
- 2) Each procedure should be tested to avoid bugs.
- 3) Each player in the group takes a turn typing in a "function sentence" beginning with the command, SHOW, and ending with a number. In between,

there should be the name(s) of at least one Logo function procedure. (Logo primitive reporters may also be used, ie... difference, sin, sqrt, etc...)

The "function word problem" should be challenging, but able to be solved. Therefore, the player creating the problem should solve the problem in his/her head before typing it. This will help avoid outputs with tricky decimals or very large numbers. Remember that the object of the game is to stump your opponents with a challenging problem you can solve.

DO NOT PRESS RETURN/ENTER YET!

Keeping Score

- You always **earn 1** point for a correct answer
- The player who created the problem **earns 1** extra point for each opponent who answered incorrectly, **ONLY** if the player who created the problem correctly solved the problem
- The player who created the problem **loses 2** points for each opponent who solved the problem correctly, if the player who created the problem incorrectly solves his/her problem
- If no player solves the problem correctly, the creator of the problem **loses 1** point

- 4) Each member of the group, including the inventor of the function sentence should attempt to solve the problem within a reasonable amount of time (1-2 minutes) and write the answer down on a sheet of paper.
- 5) When each player has recorded their answer, press the ENTER/RETURN key to have Logo display the

actual correct answer.

- 6) Evaluate who was correct and who was incorrect and adjust the score.

The rules for scoring reward correct answers, but do not punish incorrect answers by anyone except the person who created the problem. This discourages players from playing impossible problems.

- 7) Pass the computer to the next player and repeat steps 3-6.

