**The Outlier Game**

This is a game for two players. Each player should have a graphing calculator.

Names of Players:

 Player 1: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Player 2: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Before playing the two players should agree to use the same window. Write your choices in the space below.

 Xmin = \_\_\_\_\_\_\_\_\_\_\_ Xmax = \_\_\_\_\_\_\_\_\_\_\_\_ Xscl = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Ymin = \_\_\_\_\_\_\_\_\_\_\_ Ymax = \_\_\_\_\_\_\_\_\_\_\_\_ Yscl = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Now each player enters ten ordered pairs in L1 and L2. Each of the points MUST lie within the window. The ordered pairs may not all lie on the same line but they should have a strong positive correlation.

Calculate the equations of the regression lines and the value of *r*

Player 1: Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ *r* = \_\_\_\_\_\_\_\_\_\_

Player 2: Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ *r* = \_\_\_\_\_\_\_\_\_\_

Now switch calculators. Enter an ordered pair in the 11th row of L1 and L2. You must pick a point that lies within the window. Your object is to reduce the value of *r* by as much as possible.

Again calculate the equations of the regression lines and the value of *r*.

Player 1’s calculator: Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ *r* = \_\_\_\_\_\_\_\_\_\_\_\_

Player 2’s calculator: Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ *r* = \_\_\_\_\_\_\_\_\_\_\_\_

Which player succeeded in reducing the value of *r* on the other player’s calculator the most? This player is the winner!