

QUANTITATIVE METHODS

Martin Huard

February 16, 2005

Assignment 9

This assignment is due **Monday February 21, 2005** at the beginning of the class.

You must give a print out of your Worksheet, and send a copy by e-mail, where your document should be saved under “Assignment 9 – Your Name”.

Question 1 (20 points)

A communications researcher wanted to measure the effect of television viewing on aggressive behavior. He questioned a random sample of children as to how many hours of television they watch daily (x) and then, as a measure of aggression, observed the number of schoolmates they physically attacked (shoved, pushed or hit) on the playground during a 15-minute recess (y).

1. Make the same presentation as for previous assignments.
2. The results obtained by the researcher can be found on the document “Data – TV vs Aggression” on my web site. Copy the results in your spreadsheet.
3. Using Excel, find the slope and the y -intercept. Give the equation of the least-squares line.
4. Using Excel, predict the number of schoolmates attacked by a child who watches television 3 hours daily.
5. Using Excel, find the coefficient of correlation and the coefficient of determination.
6. How would you describe the correlation? (Positive or negative, perfect, high, moderate, low or no correlation).
7. Based on the correlation you obtained, how would you rate the accuracy of the forecasted value found in 4?
8. Using Excel, draw a scatter diagram that includes the least-squares line, its equation, and the coefficient of determination.