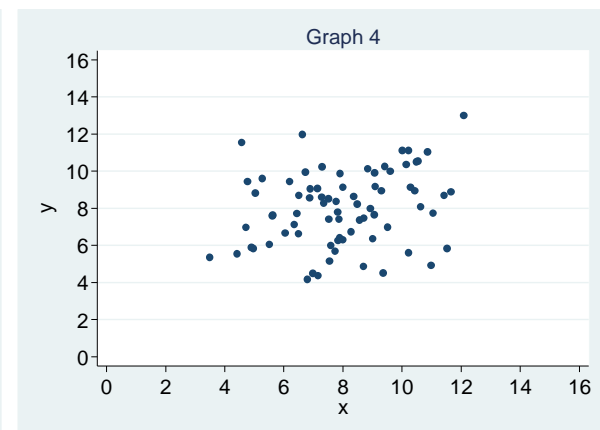
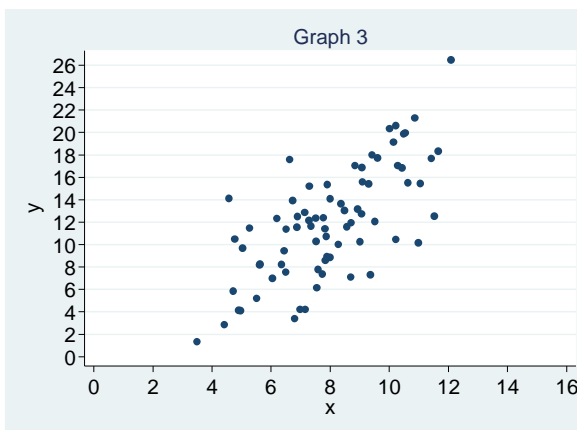
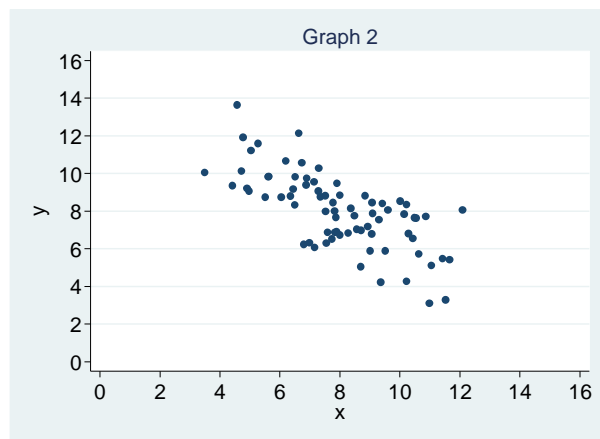
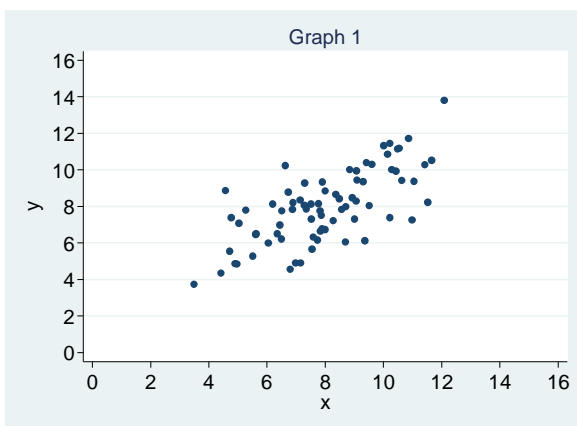


MSc in Migration Studies
 Research Methods
 Hilary Term 2015

2. The graphs below are scatter plots for 75 observations on four pairs of variables. Indicate which graph depicts the following relations and explain why.

- A. Correlation x,y : $-.70$
 Regression equation for y on x : $\hat{y} = 13.6 - .7x$
- B. Correlation x,y : $.25$
 Regression equation for y on x : $\hat{y} = 2.4 + .7x$
- C. Correlation x,y : $.70$
 Regression equation for y on x : $\hat{y} = -2 + 1.75x$
- D. Correlation x,y : $.70$
 Regression equation for y on x : $\hat{y} = 2.5 + .5x$



3. A politician claims that immigrants are less liberal than natives. You are interested in exploring if the politician has a point and decide to test his claim with the ESS. You operationalize immigrant status as born abroad (question C28) and liberalism as attitude towards homosexuality (question B31)
 - A. What is the dependent variable? What is its measurement level?
 - B. What is the independent variable? What is its measurement level?
 - C. B31 is measured from more to less liberal attitudes. For ease of interpretation it is better to create a new variable that runs from less to more liberal attitude. Create this variable. Also create a dichotomous variable for immigrant status using C28 as you have done in previous weeks. For later interpretation it is recommended you make this a 0-1 variable (rather than 1-2 as it is currently).
 - D. It is a good habit to look at the data before running a statistical test: are there any unusual values in the dependent or independent variable? Is the relation between the two variables in the sample the same as you expected? For the latter step you can make a cross-tabulation (with row or column percentages) or calculate group-specific means.
 - E. You can treat the dependent variable as interval. Run an unpaired t-test of the difference in attitude towards homosexuality between natives and immigrants and discuss the results. In your discussion draw a conclusion about whether or not the results are statistically significant at a significance level α (alpha)=.05.
 - F. Run a regression analysis testing the effect of immigrant status on attitude towards homosexuality.
 - G. What does the intercept ($_cons$) stand for?
 - H. What does the regression coefficient for immigrant stand for? Do you feel this is large or small? Why?
 - I. What are the H_0 and H_a for the regression coefficient (β) ?
 - J. Using a hypothesis test with significance level α (alpha)=.05 what do you conclude about the effect of immigrant status on attitude towards homosexuality?
 - K. Compare the results from the regression analysis to the results from the t-test from 4E. What do you notice?
 - L. Can you think of any alternative explanations for the found difference between natives and immigrants?