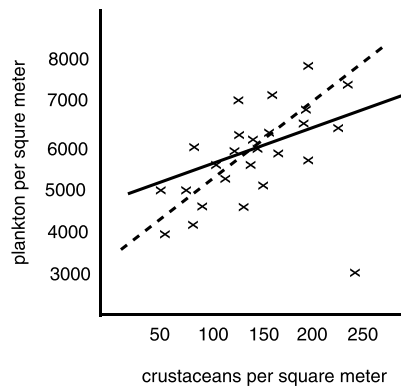


Quiz 3 (Individual) for Statistics 113
Statistics and Society—Spring 2000
Material Covered: Chapters 10 of notes and text
For: Friday, 25th February

This is a 15 minute quiz, worth 6% and marked out of 6 points. The total possible points awarded for each question is given in square brackets at the beginning of each question. Anything that can fit on one side of an $8\frac{1}{2}$ by 11 inch piece of paper may be used as a reference during this quiz. A calculator and appropriate statistical tables may also be used. No other aids are permitted.

Name (please print): _____
last first

A study on the relationship between the number of plankton per square meter (y) and the number of crustaceans per square meter (x) can be summarized in the following scatter plot.



- (a) [1] The (approximate) point of averages is (circle closest one) **(5500, 150)** / (6000, 50) / (100, 7000) / (150, 4000) / (150, 6000) hours.
- (b) [1] The (approximate) SD in the number of plankton per square meter is (circle closest one) **500** / 1000 / 1500 / 2000 / 2500.
- (c) [1] The (approximate) SD in the number of crustaceans per square meter is (circle closest one) **50** / 100 / 150 / 200 / 250.
- (d) [1] The slope of the regression line is _____.
- (e) [1] How many plankton per square meter would we predict for 50 crustaceans per square meter? (Circle closest one) **3000** / 4000 / 5000 / 6000 / 7000.
- (f) [1] Circle none, one or more.
- (a) Both the SD line and regression line are sensitive to the outlier.
 - (b) Both the SD line and regression line are shallower than they would be if there was no outlier on the scatter plot.
 - (c) The SD line, but not the regression line, is shallower than it would be if there was no outlier on the scatter plot.
 - (d) The regression line, but not the SD line, is shallower than it would be if there was outlier on the scatter plot.
 - (e) The SD line and the regression line are unaffected by the outlier on the scatter plot.

(a) [1] **(150, 6000)**

(b) [1] **1000**

(c) [1] **50**

(d) [1] **14** ($\frac{1000(0.7)}{50}$)

(e) [1] **5000**

(f) [1] (a) and (b)