## Scatterplots Hw

**i)** Which of the following are true about the data represented by this scatterplot?
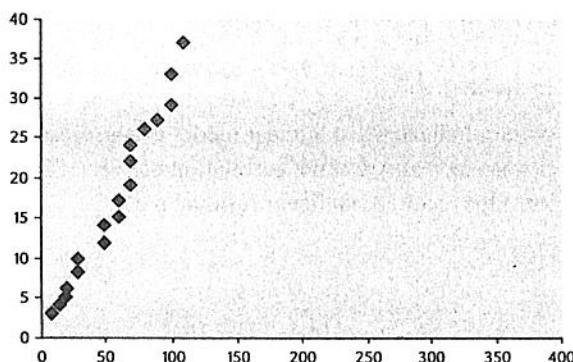


I. The points show a strong positive correlation.
II. The value of the slope of the regression line is greater than the value of the correlation.
III. The correlation of the points is greater than the correlation of the points in the residual plot.

A. I only
B. I and II
C. I and III
D. II and III
E. I, II, and III

**2)** Consider the following three scatterplots:
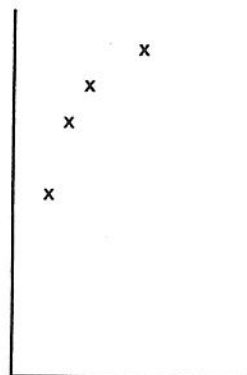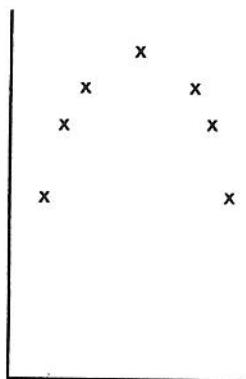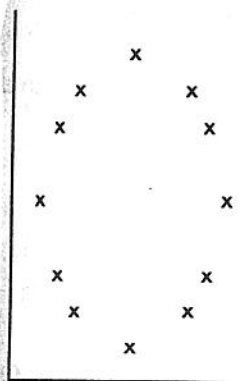


Which of the following is a true statement about the correlations for the three scatterplots?

(A) None are 0.
(B) One is 0, one is negative, and one is positive.
(C) One is 0, and both of the others are positive.
(D) Two are 0, and the other is 1.
(E) Two are 0, and the other is close to 1.

3) Consider the following scatterplot of midterm and final exam scores for a class of 15 students.
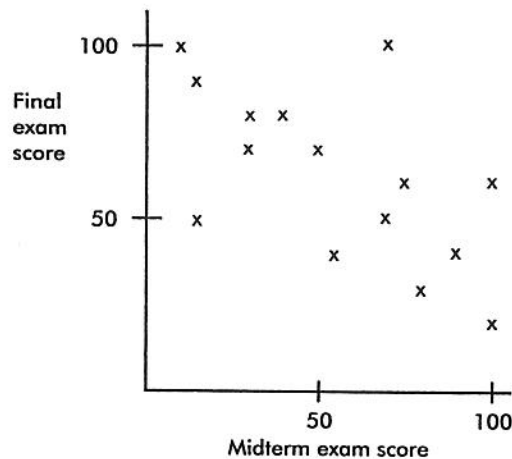
Which of the following are true statements?

    I. The same number of students scored 100 on the midterm exam as scored 100 on the final exam.

    II. Students who scored higher on the midterm exam tended to score higher on the final exam.

    III. The scatterplot shows a moderate negative correlation between midterm and final exam scores.

(A) I and II
(B) I and III
(C) II and III
(D) I, II, and III
(E) None of the above gives the complete set of true responses.

1) Following is a scatterplot of the average life expectancies and per capita incomes (in thousands of dollars) for people in a sample of 50 countries.
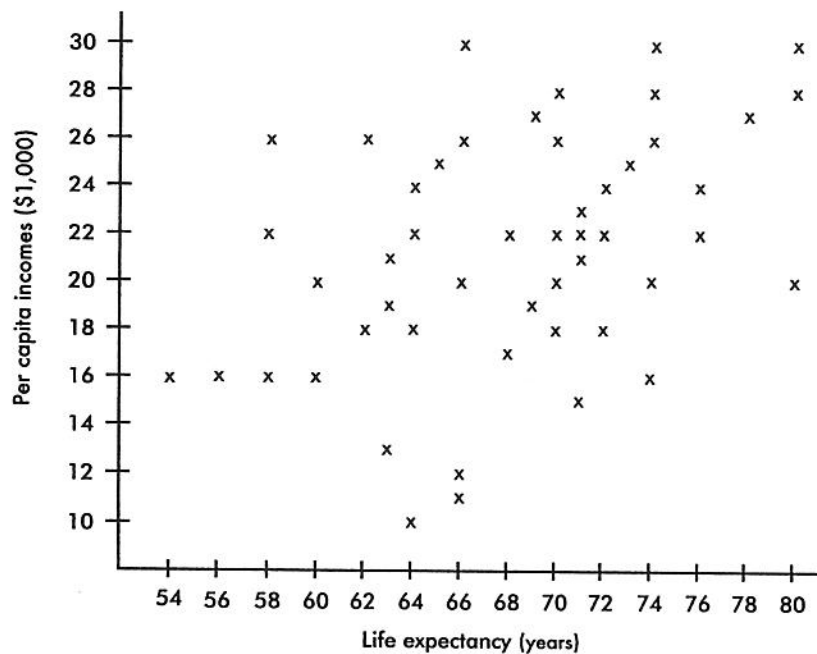


a. Estimate the mean for the set of 50 life expectancies and for the set of 50 per capita incomes.

b. Estimate the standard deviation for the set of life expectancies and for the set of per capita incomes. Explain your reasoning.

c. Does the scatterplot show a correlation between per capita income and life expectancy? Is it positive or negative? Is it weak or strong?