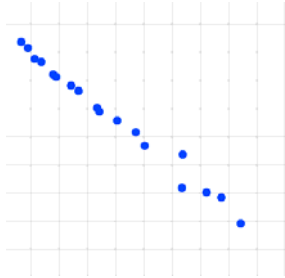


Self-Check 26

Lines of Fit

1. A set of data has the following scatterplot. Which is the probable r value for the data?

- A. -1
- B. -0.85
- C. 0.85
- D. 1



2. Find the Least Squares Regression Line (LSRL) for this data set.

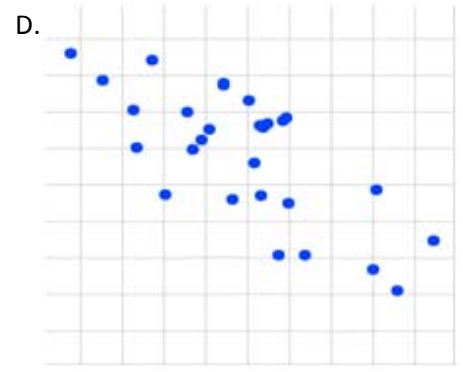
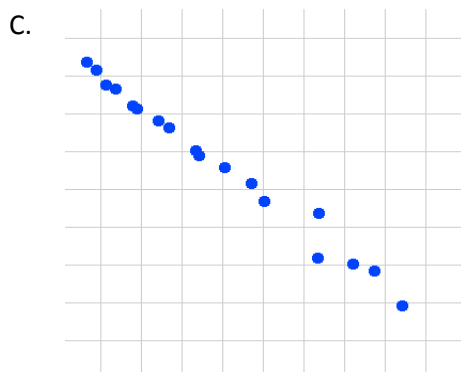
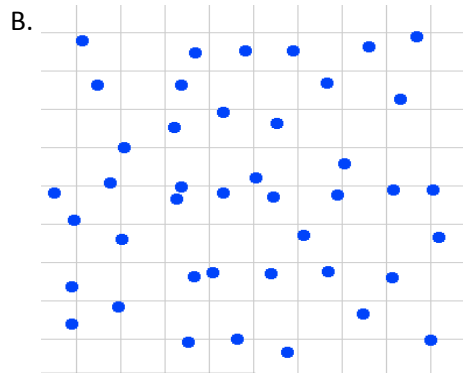
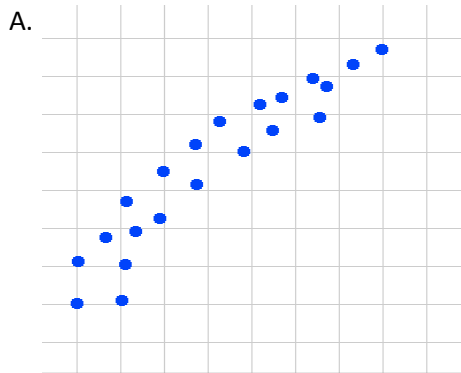
(7, 12) (10, 15) (13, 14) (3, 2) (5, 8)

- A. $\hat{y} \approx .62x + 1.23$
- B. $\hat{y} \approx .78x + .89$
- C. $\hat{y} \approx 1.17x + 1.25$
- D. $\hat{y} \approx 1.23x + .62$

3. Using the LSRL equation from question 2, predict the outcome when the dependent variable is 4?

- A. 5.94
- B. 2.35
- C. 4.01
- D. 3.71

4. Which set of data has an r value of zero?

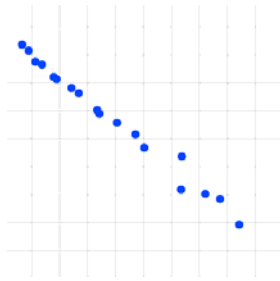


Solutions to Self-Check for Tutorial 26

Lines of Fit

1. A set of data has the following scatterplot. Which is the probable r value for the data?

B. -0.85



2. Find the Least Squares Regression Line (LSRL) for this data set.

(7, 12) (10, 15) (13, 14) (3, 2) (5, 8)

c. $\hat{y} \approx 1.17x + 1.25$

3. Using the LSRL equation from question 2, predict the outcome when the dependent variable is 4?

Since x is the independent variable and y is the dependent variable, substitute $y = 4$ in the LSRL equation and solve for x .

$$\hat{y} \approx 1.17x + 1.2$$

$$4 \approx 1.17x + 1.25$$

B. 2.35

4. Which set of data has an r value of zero?

D. Graph B seems to have no apparent correlation and, hence, would have an r value of zero. Note Graph D looks to have a weak negative correlation and therefore would have a small negative r value.