**Note: Pictures can be resized and moved around, and the tables can be reformatted. In LaTeX, '\_' means subscript, '\hat' means an accent, and '\frac' means a fraction.**

1. A regression analysis between demand (y in 1000 units) and price (x in dollars) resulted in the following equation:. = 9 - 3x. The above equation implies that if the price is increased by $1, the demand is expected to \_\_\_\_\_.

A. increase by 6 units

B. decrease by 3 units

C. decrease by 6,000 units

D. decrease by 3,000 units

Feedback: Always pay attention to the units.

**Correct Answer: D**

2. A regression analysis between sales (in $1000s) and price (in dollars) resulted in the following equation:. = 50,000 - 8x. The above equation implies that an increase of \_\_\_\_\_.

A. $1 in price is associated with a decrease of $8 in sales

B. $8 in price is associated with an increase of $8,000 in sales

C. $1 in price is associated with a decrease of $42,000 in sales

D. $1 in price is associated with a decrease of $8,000 in sales

**Correct Answer: D**

3. A regression analysis between sales (y in $1000) and advertising (x in dollars) resulted in the following equation: = 50,000 + 6x. The above equation implies that an increase of \_\_\_\_\_.

A. $6 in advertising is associated with an increase of $6,000 in sales

B. $1 in advertising is associated with an increase of $6 in sales

C. $1 in advertising is associated with an increase of $56,000 in sales

D. $1 in advertising is associated with an increase of $6,000 in sales

**Correct Answer: D**

4. If all the points of a scatter diagram lie on the least squares regression line, then the coefficient of determination for these variables based on these data \_\_\_\_\_.

A. is 0

B. is 1

C. is either 1 or -1, depending upon whether the relationship is positive or negative

D. could be any value between -1 and 1

**Correct Answer: B**

5. In a regression analysis, if r^2 = 1, then \_\_\_\_\_.

A. SSE must also be equal to 1

B. SSE must be equal to 0

C. SSE can be any positive value

D. SSE must be negative

**Correct Answer: B**

6. In regression and correlation analysis, if SSE and SST are known, then with this information the \_\_\_\_\_.

A. coefficient of determination can be computed

B. slope of the line can be computed

C. y-intercept can be computed

D. All of the answers are correct.

**Correct Answer: A**

7. In a regression analysis, if SSE = 500 and SSR = 300, then the coefficient of determination is \_\_\_\_\_.

A. .600

B. .166

C. 1.666

D. .375

**Correct Answer: D**

8. If a data set has SST = 2,000 and SSE = 800, then the coefficient of determination is \_\_\_\_\_.

A. .4

B. .6

C. .5

D. .8

**Correct Answer: B**

9. In a regression analysis, if SST = 4500 and SSE = 1575, then the coefficient of determination is \_\_\_\_\_.

A. .35

B. .65

C. 2.85

D. .45

**Correct Answer: B**

10. It is possible for the coefficient of determination to be \_\_\_\_\_.

A. larger than 1

B. less than 1

C. less than 0

D. All of the answers are correct, depending on the situation under consideration.

**Correct Answer: B**