6- A multiple regression analysis including 50 data points and 5 independent variables results in  40. The multiple standard error of estimate will be:

|  |  |
| --- | --- |
| a. | 0.901 |
| b. | 0.888 |
| c. | 0.800 |
| d. | 0.953 |
| e. | 0.894 |

4. Sampling error is evident when:

|  |  |
| --- | --- |
| a. | a question is poorly worded |
| b. | the sample is too small |
| c. | the sample is not random |
| d. | the sample mean differs from the population mean |

When using exponential smoothing, if you want the forecast to react quickly to movements in the series, you should choose:

|  |  |
| --- | --- |
| a. | values of  near 1 |
| b. | values of  near 0 |
| c. | values of  midway between 0 and 1 |
| d. | it depends on the data set |

9. Consider the following linear programming problem:

Maximize 

Subject to







The above linear programming problem:

|  |  |
| --- | --- |
| a. | has only one optimal solution |
| b. | has more than one optimal solution |
| c. | exhibits infeasibility |
| d. | exhibits unboundedness |

10. The expected value of perfect information (EVPI) is equal to:

|  |  |
| --- | --- |
| a. | EMV with *posterior* information – EMV with *prior* information |
| b. | EMV with free perfect information – EMV with information |
| c. | EMV with free perfect information – EMV with no information |
| d. | EMV with perfect information – EMV with less than perfect information  Please answer the following True or False |

1. Assume that the histogram of a data set is symmetric and bell shaped, with a mean of 75 and standard deviation of 10. Then, approximately 95% of the data values were between 55 and 95.
2. A low *p*–value provides evidence for accepting the null hypothesis and rejecting the alternative.
3. A *t*-test is used to determine whether the coefficients of the regression model are significantly different from zero.
4. Decision trees are more appropriate tools than decision tables when a sequence of decisions must be made.
5. If a solution to an LP problem satisfies all of the constraints, then is must be feasible and bounded.
6. Correlation is measured on a scale from 0 to 1, where 0 indicates no linear relationship between two variables, and 1 indicates a perfect linear relationship.
7. In multiple regression, the problem of multicollinearity affects the *t*-tests of the individual coefficients as well as the *F*-test in the analysis of variance for regression, since the *F*-test combines these *t*-tests into a single test.
8. In a random walk model, there are significantly more runs than expected, and the autocorrelations are not significant.
9. When we maximize or minimize the value of a decision variable by running several simulations simultaneously, we have found an optimal solution to the problem and attitude toward risk becomes irrelevant.