1. What does the residual plot above tells us?
A. The residuals are linear; therefore, normally distributed.
B. The linear relationship between Part No. (order) and Length (of part) is valid.
C. The variance of the residuals is not constant.
D. The relationship between Part No. (order) and Length (of part) is not simple linear.
E. The residual plot shows no problems.

2. What conclusion may be made based on the output above?
A. There is no relationship between the race of the victim and killer.
B. People tend to kill people of their own race.
C. There is a statistically significant relationship between the race of the victim and killer.
D. There is a strong linear relationship between the race of the victim and killer.
E. The race of the killer affects the race of the victim and vice versa.

3. Rejecting $H_0 : \beta_1 = 0$ in the regression inference procedure says
A. the $x$'s are not useful in predicting the $y$'s.
B. the slope of the regression line is large (i.e., a big number).
C. the probability of making a Type II error is NOT 0.
D. Exactly two of the above are correct.
E. None of the above are correct.

4. What does ‘statistical significance’ mean for a One-way ANOVA $F$-test?
A. It means that true (population) means are significant.
B. It means that the true means are equal.
C. It means that the group effect on the means is significant.
D. It means that the true slope is 0.
E. None of the above are true.

5. Given the following 90, 95, and 99% confidence intervals for the true population slope, $\beta_1$: (-1.28,1.19), (-1.55,1.46), (-2.04,2.13), what is the best statement of the p-value for testing $H_0 : \beta_1 = 0$ vs. $H_A : \beta_1 \neq 0$?
A. p-value > 0.10
B. 0.10 > p-value > 0.05
C. 0.05 > p-value > 0.01
D. p-value < 0.01
E. The slope must be positive, so there is an error in the confidence intervals, and the p-value cannot be determined.

6. Which of the following best describes the assumptions for the Chi-squared test in a contingency table?
A. Each sample size must be at least 30.
B. The variances must be equal.
C. The means must be equal.
D. The proportions must be equal.
E. Each count must be at least 5.
7. Which of the following would be a valid statement about the output above? Note: `agew` is `wife’s age` and `ageh` is `husband’s age`.
   A. Since the p-value is 0, the true mean ages of husbands and wives are not equal.
   B. Since the p-value is 0.173, `husband’s age` is a NOT good predictor for `wife’s age`.
   C. Since the p-value is 0.173, `husband’s age` is a good predictor for `wife’s age`.
   D. Since the p-value is 0, `husband’s age` is a good predictor for `wife’s age`.
   E. Since the p-value is 0, `husband’s age` is a NOT good predictor for `wife’s age`.

8. Which of the following is NOT an assumption of Simple Linear Regression inference procedures?
   A. The errors, or chance deviations from the line, are normally distributed.
   B. The errors, or chance deviations from the line, are independent of each other and all other variables.
   C. The errors, or chance deviations from the line, have a mean of 0.
   D. The errors, or chance deviations from the line, have a variance of 1.
   E. All of the above are valid assumptions of regression inference procedures.

9. A 95% confidence interval for the true slope, $\beta_1$, from the previous output is $(-2.036, 2.523)$. What is the probability that this interval contains the true slope?
   A. 0 or 1
   B. 0.05 or 0.95
   C. 0.95 only
   D. 0.05 only
   E. We cannot say since we don’t know the true slope.

10. Rejecting $H_0: \beta_1 = 0$ in the regression inference procedure says
    A. the x’s are not useful in predicting the y’s.
    B. the slope of the regression line is large (i.e., a big number).
    C. the probability of making a Type II error is NOT 0.
    D. Exactly two of the above are correct.
    E. None of the above are correct.

11. What does the residual plot above tell us?
    A. The residuals are not linear, which is good.
    B. The linear relationship between fatality rate and total number of licensed drivers is not valid.
    C. The variance of the residuals is not constant.
    D. The assumption of normality of the residuals may have been violated.
    E. The residual plot shows no problems.

12. What conclusion can we make about the output above? Note: `rate`=fatality rate and `ldtot`=total number of licensed drivers.
    A. The p-value is 0, so `ldtot` and `rate` have no significant linear relationship.
    B. The p-value is 0.267, `ldtot` and `rate` have no significant linear relationship.
    C. The p-value is 0.00002, `ldtot` and `rate` have no significant linear relationship.
    D. The p-value is 0.00002, `ldtot` and `rate` have significant linear relationship.
    E. The p-value is 0, `ldtot` and `rate` have a significant linear relationship.

1D,2C,3E,4C,5A,6E,7D,8D,9A,10E,11C,12B