

AP Statistics Review Quiz 3a**Multiple Choice**

Identify the letter of the choice that best completes the statement or answers the question.

- _____ 1. In a statistics course, a linear regression equation was computed to predict the final exam score from the score on the first test. The equation was $y = 10 + .9x$ where y is the final exam score and x is the score on the first test. Carla scored 95 on the first test. What is the predicted value of her score on the final exam?
- 95
 - 85.5
 - 90
 - 95.5
 - None of the above
- _____ 2. All but one of the following statements contains a blunder. Which statement is correct?
- There is a correlation of 0.54 between the position a football player plays and their weight.
 - The correlation between planting rate and yield of corn was found to be $r=0.23$.
 - The correlation between the gas mileage of a car and its weight is $r=0.71$ MPG.
 - We found a high correlation ($r=1.09$) between the height and age of children.
 - We found a correlation of $r=-.63$ between gender and political party preference.
- _____ 3. In regression, the residuals are which of the following?
- Those factors unexplained by the data
 - The difference between the observed responses and the values predicted by the regression line
 - Those data points which were recorded after the formal investigation was completed
 - Possible models unexplored by the investigator
 - None of the above
- _____ 4. The equation of the least squares regression line for a given set of points is $\hat{y} = 1.3 + 0.73x$. What is the residual for the point (4,7)?
- 2.78
 - 3.00
 - 4.00
 - 4.22
 - 7.00