**Top Ten Phrases to Use in AP Statistics Answers**

***Underlined words/phrases or blanks indicate context is needed.***

**regression:** interpretation, in context, of

**Linear regression:**

1. ***r*** *–* There is a [weak/moderate/strong], [positive/negative] linear association between \_\_\_\_\_\_x\_\_\_\_\_\_ and \_\_\_\_\_\_\_y\_\_\_\_\_\_\_

2. ***r2*** – \_\_\_\_ percent of the variation in the \_\_\_\_\_y\_\_\_\_\_\_ can be explained by the

approximate linear relationship with the \_\_\_\_\_\_x\_\_\_\_\_\_\_.

3. **slope** “b”For every 1 \_\_\_\_\_\_x\_\_\_\_\_\_\_, our model predicts an average increase/decrease of *\_\_\_*b\_\_\_\_\_ in the \_\_\_\_\_y\_\_\_\_\_\_.

4. ***y*-intercept** “a” At an \_\_\_\_\_\_x\_\_\_\_\_\_\_value of 0, our model predicts a \_\_\_\_\_y\_\_\_\_\_\_ value of *\_\_\_*a\_\_\_\_\_

*(you may also comment on whether this value makes any sense)*

**confidence intervals**: interpretation, in context, of

5. **confidence interval** – I'm confidence level% confident that the true [proportion/mean] of context is between lower bound and upper bound, because I used a method that captures the true [proportion/mean] in approximately \_\_\_ our of 100 attempts in repeated sampling.

6. **confidence level** – If this [poll/experiment] were repeated many times, then about confidence level % of the resulting confidence intervals would contain the true [proportion/mean] of variable.

**hypothesis tests**: null hypotheses and interpretation, in context, of results:

7a. One-sample null hypothesis (Ho) – The [proportion/mean] of variable is equal to (**not** different from) a [known/assumed proportion/mean].

7b. Two-sample null hypothesis (Ho) – The [proportion/mean] of variable1 is equal to (**not** different from) the [proportion/mean] of variable2.

8**. *p*-value** – p-value% is the probability of getting a [proportion/mean] of variable as extreme or more extreme than the one observed if the null hypothesis is correct.

9. **reject the null hypothesis** – At the alpha% of significance, there is convincing evidence that the alternative hypothesis is true.

10. **fail to reject the null hypothesis** – At the alpha% of significance, there is **not** convincing evidence to reject the null hypothesis (or to conclude that the alternative hypothesis is true). *Remember, you have not proved the null hypothesis is true—just failed to prove it false!*