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

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

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

1. ***r*** *–* There is a [weak/moderate/strong], [positive/negative] linear association between explanatory variable and response variable

2. ***r2*** – x percent of the variation in the response variable can be explained by the

approximate linear relationship with the explanatory variable.

3. **slope** of the LSRL **(b)** – for every 1 unit increase in the explanatory variable, our model predicts an average increase of *y* units in the response variable.

4. ***y*-intercept** of the LSRL **(a)** – at an explanatory variable value of 0 units, our model predicts a response variable value of *y* units. *(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 population [proportion/mean] of variable is between lower bound and upper bound.

- or -

I am confidence level% confident that the interval (lower bound, upper bound) captures the true [proportion/mean] of variable.

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!*