1. Does running an ANOVA give the same p-value results as running a regression analysis when testing the difference in group means? **1 / 1 point**

- (●) True
- ( ) False

Correct
Correct! We can run the regression in place of ANOVA

2. Give the results of the regression analysis below, what is the correlation coefficient? **1 / 1 point**

Dep. Variable:	eval	**R-squared:**	0.036
Model:	OLS	**Adj. R-squared:**	0.034
Method:	Least Squares	**F-statistic:**	17.08
Date:	Thu, 03 Sep 2020	**Prob (F-statistic):**	4.25e-05
Time:	16:36:25	**Log-Likelihood:**	-375.32
No. Observations:	463	**AIC:**	754.6
Df Residuals:	461	**BIC:**	762.9
Df Model:	1		
Covariance Type:	nonrobust		

- (●) 0.19
- ( ) 17.08
- ( ) 0.034
- ( ) 0.036

Correct
Correct!

3. Given the results for tenure-ship vs teaching evaluation, if our null hypothesis is that there is no difference in mean evaluation scores for professors who are tenured vs professors who are not tenured. What will be the conclusion of the t-test statistics? **1 / 1 point**

	coef	std err	t	P>|t|	[0.025	0.975]
const	4.1333	0.055	75.791	0.000	4.026	4.241
tenured_prof	-0.1732	0.062	-2.805	0.005	-0.295	-0.052

- (●) P-value is less than 0.05, that means that there is a difference in mean values for professors who are tenures versus professors who are not tenured.
- ( ) P-value is less than 0.05, we will fail to reject the null hypothesis.
- ( ) There is no conclusive evidence in the results above.

Correct
Correct!

4. We run a regression analysis in place of a t-test to test if there is a difference in number of students enrolled in classes with professors who are native english speakers (English_speakers = 1) vs professors who are not (English_speakers = 0). The table is shown below. What does the coefficient for English_speakers mean? **1 / 1 point**

	coef	std err	t	P>|t|	[0.025	0.975]
const	29.6071	14.150	2.092	0.037	1.802	57.413
English_speaker	27.2158	14.598	1.864	0.063	-1.471	55.902

- ○ Professors who are English speakers get about 30 more students enrolled on average
- ◉ Professors who are English speakers get about 27 more students enrolled on average
- ○ We can't conclude because the error is too large and if factored in could change the conclusion of the results
- ○ Professors who are English speakers get about 27 less students enrolled on average

✓ **Correct**
Correct!

5. Which of these are correct about correlation coefficient? (Select all that apply) **1 / 1 point**

- ☐ A correlation coefficient of -0.9 indicates a weak linear relationship?
- ☑ A correlation coefficient of -0.9 indicates a strong linear relationship?

✓ **Correct**
Correct! The negative sign means they are strongly negatively correlated

- ☐ The correlation coefficient (r) ranges from 0 to 1
- ☑ The correlation coefficient (r) ranges from -1 to 1

✓ **Correct**
Correct! Values can be positively and negatively related

6. Which of these options is most likely to be the null hypothesis for testing correlation between two variables? **1 / 1 point**

- ○ There is an association between an instructor's looks and teaching evaluation score.
- ○ There is a partial association between an instructor's looks and teaching evaluation score.
- ◉ There is no association between an instructor's looks and teaching evaluation score.

✓ **Correct**
Correct!

7. If we ran a regression analysis between two continuous variables amount of time spent running on a treadmill vs the amount of calories burnt. If I get a coefficient of 0.33 for the amount of time running on the treadmill and an R-square value of 0.81. What is the correlation coefficient? **1 / 1 point**

- (●) 0.9
- ( ) 0.81
- ( ) 0.66
- ( ) 0.77

Correct
Correct!

8. Which of the following best explains a scatter plot? **1 / 1 point**

- ( ) A one-dimensional graph of randomly scattered data.
- (●) A two-dimensional graph of data values.
- ( ) A two-dimensional graph of a curved line.
- ( ) A two-dimensional graph of a straight line.

Correct
Correct! A scatter plot represents the relationship between two continuous data