

Name: _____
 MAT 222
 Spring 2019
 Quiz 7

“My name’s Richard Grayson, but all the kids at the orphanage call me Dick.’
 ‘Well, children can be cruel.’ ”
 –Richard Grayson & Bruce Wayne,
 LEGO Batman

Problem 1: An instructor is trying to predict student’s uncurved MAT 222 final grades from their MAT 221 final grade. They perform a regression analysis, the results of which are (partially) found below.

Analysis of Variance

Source	DF	Adj SS	Adj MS	F-Value	P-Value
Regression	___	189.77	_____	11.71	0.004
Error	___	_____	16.21		
Total	16	432.94			

Model Summary

S	R-sq	R-sq (adj)
_____	_____%	40.1%

Coefficients

Term	Coef	SE Coef	T-Value	P-Value
Constant	2.143	_____	0.64	0.530
221 GRADE	0.6873	0.2009	_____	0.004

The regression equation is

222 GRADE = _____

- (a) Complete the missing entries in the table above.
- (b) How many students were used to create this model? _____
- (c) According to this model, are 221 and 222 grades positively or negatively correlated or neither?

- (d) Explain why the p -value for the F -value and the p -value for the t -value for the coefficient ‘221 GRADE’ are the same.