

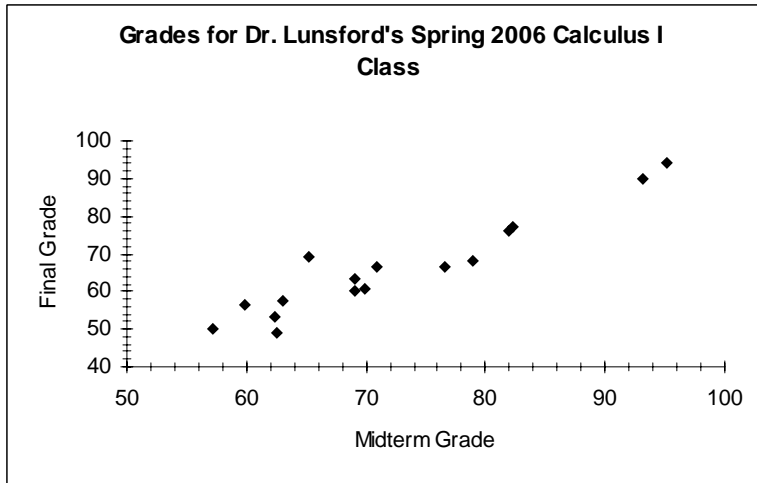
Pledge:

9/28/2006
Dr. Lunsford

MATH 171
Quiz 5

Name: _____
20 Points Possible

Below you are given the Midterm and Final Grades for the sixteen students who completed Dr. Lunsford's Calculus I class last Spring semester. You are also given a scatter plot of Final Grade versus Midterm Grade. Please use these data to answer the following questions.



Midterm Grade	Final Grade
65	69
69	60
62	53
77	66
82	76
60	57
79	68
70	61
82	77
57	50
62	49
95	94
93	90
63	58
71	66
69	64

1. Find the centroid of the data and plot it on the scatter plot above. Clearly indicate the coordinates of the centroid below and on the scatterplot. (3 points)
2. Find the equation of the regression line of Final Grade on Midterm Grade that models the association between these two variables. Clearly give the equation of the line below. Accurately draw the regression line on the scatterplot above. (5 points)
3. On average, what Final Grade does this model predict for students who have a Midterm Grade of 80? Show this prediction (using up/down and over lines) on the graph. (4 points)
4. Using the regression model, find the error (residual) for the data point (65,69) and represent this residual on the graph. (3 points)
5. Find the value of the correlation coefficient for these data. Clearly indicate your answer. (2 points)
6. True or False (circle one): Midterm Grade and Final Grade have a positive but weak association for these students. (2 points)
7. Fill in the Blank: Approximately _____ percent of the variation in Final Grade is explained by this regression model on Midterm Grade. (1 point)