Problem 6: Linear Regression

The following table shows the midterm and final exam grades obtained for students in a database course.

x Midterm exam	*y* Final exam
72	84
50	63
81	77
74	78
94	90
86	75
59	49
83	79
65	77
33	52
88	74
81	90

(a) Use the *method of least squares* to find an equation for the prediction of a student's final exam grade based on the student's midterm grade in the course.
(b) Predict the final exam grade of a student who received an 86 on the midterm exam.