Name: ID: Serial:

The following data set gives relationship between the square footage (in thousands of feet) of heated floor space and the sales price (in thousands of Riyals) of six houses randomly selected from those sold during a given week:

Footage (x)	1.5	2.1	1.7	1.5	1.9	2.4
Price (y)	89	109	101	91	102	113

Given that: the regression equation is $\hat{y}$ = 53.1995 + 25.748 x. With $\sum (x_i - \bar{x})^2 = 0.635$, $\sum x_i y_i - \sum x_i \sum y_i / n = 16.35$ and MSE = 7.963.

a) Does a linear relationship exist between the selling price and square feet of heated floor? Use 5% level of significance.

b) Find 95% confidence interval for the expected price of a house with 2000 square feet of the heated floor space.

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c) What is the coefficient of determination if the correlation coefficient is 93%. Interpret both of them.