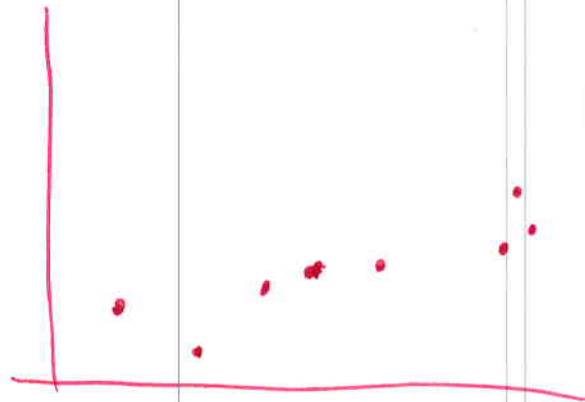


KEY

Instructions: Show all work. You may use your calculator rather than compute formulas by hand, but if you do, 'show work' by saying which program you used to obtain the result and what information you entered. Round measures of center to one decimal place more than the data, and variance/standard deviation to two decimal places more than the original data. Round probabilities to three decimal places (or percent plus one decimal place).

1. Use the data in the table to construct a scatter plot. Do you think the correlation is high here? Calculate the correlation and compare to the visual results of your plot. Does your estimate agree with the correlation value?

X	47	62	65	70	78	99	100	106	114
y	127	114	134	139	142	170	149	154	215



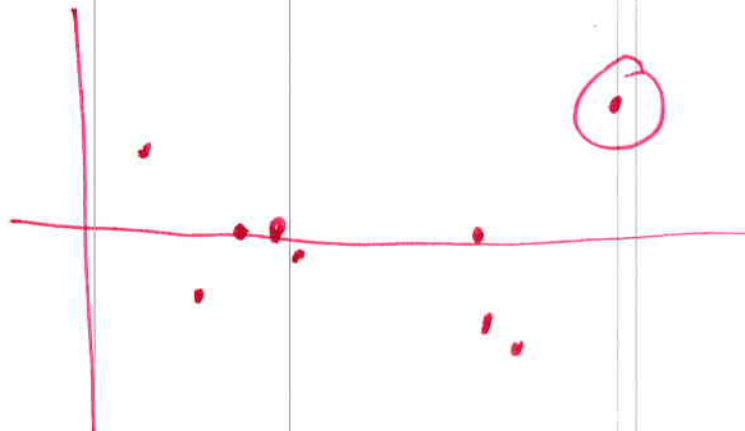
if seems modest

$$r = .8207$$

$$r^2 = .6736$$

This is ok, but not great.

2. Construct a diagnostic plot for the above data by calculating the differences between the estimated values for the y-values and their values from the samples. Sketch the plot here. Does the diagnostic plot reveal any problems in your estimate of the regression line? Explain.



this looks pretty random no obvious pattern

though this value on the end could be an outlier

could consider redoing w/o this value