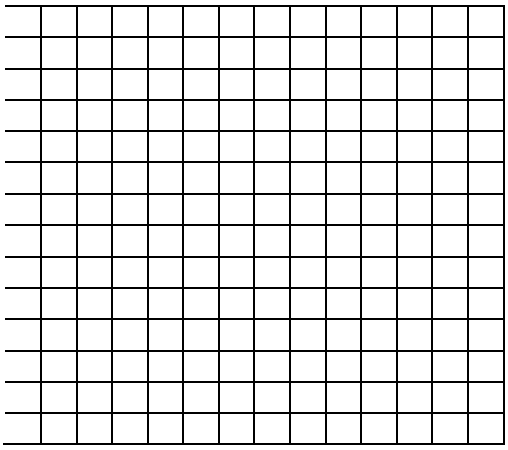
AP Statistics
Assignment # _____

Name_____
Date_____ Period_____

1. The following data is arm span and height (in inches) for 13 people.

Arm	Height	Residuals
66	68	
78	77	
67.5	68	
61.5	64.5	
72	69.5	
68	70.5	
68.5	68.5	
62.5	64	
65.5	64.5	
68.75	68.25	
70	68	
63	66.5	
69	70	

(a) Make a scatterplot of the data.



(b) Find the equation for the LSRL. _____ Also find the correlation **r**, and the coefficient of determination $\mathbf{r^2}$. **r =** _____ $\mathbf{r^2}$ = _____

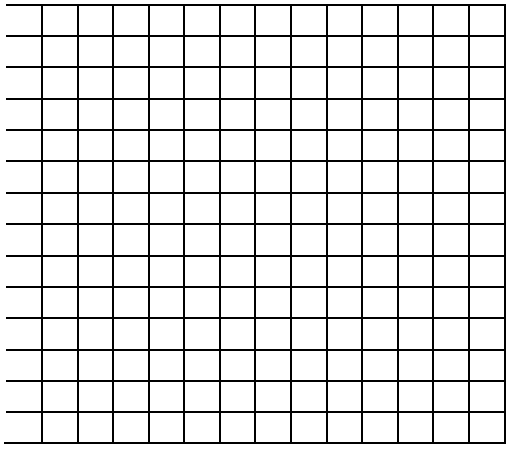
(c) Describe the form, direction and strength. List any points you think are outliers.

(d) Graph the LSRL on your scatterplot. List the two points you used here:
(____, ____) (____,____)

(e) Interpret the slope, y-intercept and r^2.

(f) Find the residuals for all of the points. List them in the table above.

(g) Make a residual plot.



(h) Interpret the residual plot. What does it tell you about whether the data really is linear in form or not? Explain.

2. Recall the data on yearly win consumption in liters of alcohol per person and yearly deaths from heart disease:

Country	Alcohol (wine)	Deaths	Residuals
Australia	2.5	211	
Austria	3.9	167	
Switzerland	5.8	115	
Canada	2.4	191	
Denmark	2.9	220	
Finland	0.8	297	
France	9.1	71	
United Kingdom	1.3	285	
United States	1.2	199	
Italy	7.9	107	

(a) Find the equation for the LSRL. _____ Also find the correlation **r**, and the coefficient of determination $\mathbf{r^2}$. **r =** _____ $\mathbf{r^2}$ = _____

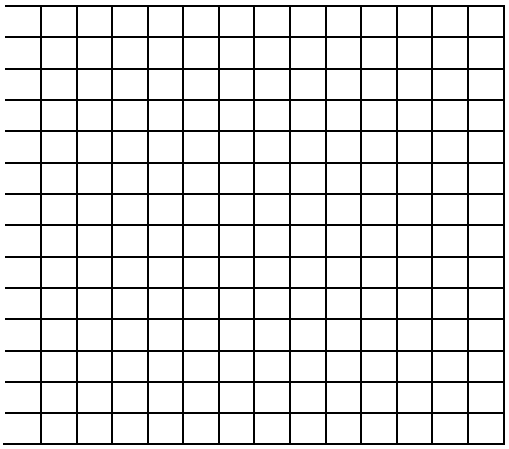
(b) Look at the scatterplot that you made for this data on the classwork sheet last Friday. Describe the form, direction and strength. List any points you think are outliers.

(c) Graph the LSRL on your scatterplot. List the two points you used here: (____, ____) (____,____)

(d) Interpret the slope, y-intercept and r^2.

(e) Find the residuals for all of the points. List them in the table above.

(f) Make a residual plot.



(g) Interpret the residual plot. What does it tell you about whether the data really is linear in form or not? Explain.