10.15

a) 1st graph shows us uncorrelated values' scatter plot because we can not fit a line on these dots such that it described the pattern of points. So X and Y are uncorrelated.

2nd graph shows us positive correlation because when X increases, Y also increases on average and we can fit positively sloped regression line here e.g. $Y = \partial X$ when $\partial > 0$

3rd graph shows us an example of negatively correlated values. In this case when X increases, Y decreases on average. It fits negatively sloped regression line and quality of fit is better than in the other two graphs.

b) As we mentioned in ~~section~~ q. a), correlation which is $|\rho(X,Y)|$ is maximum in the third graph because if we fit a line $Y = \beta X + c$, quality of fit will be quite high because dots are more or less concentrated around the line and the distances from the line will be smaller than in the other two graphs.