Assignment 6

Task 1 - Multivariate Data

(a) Yes, there is a correlation between x and y, since the correlation coefficient is very high, there is a positive linear correlation. Surprisingly, the mean, variance and persons correlation coefficient are the same for all four groups.

	I		II		III		IV	
	x	y	x	y	x	y	x	y
mean	9	7.50	9	7.50	9	7.5	9	7.50
variance	11.0	4.127	11.0	4.127	11.0	4.127	11.0	4.127
pearson	0.8164		0.8164		0.8164		0.8164	

(b) The plots are shown in Figure 1

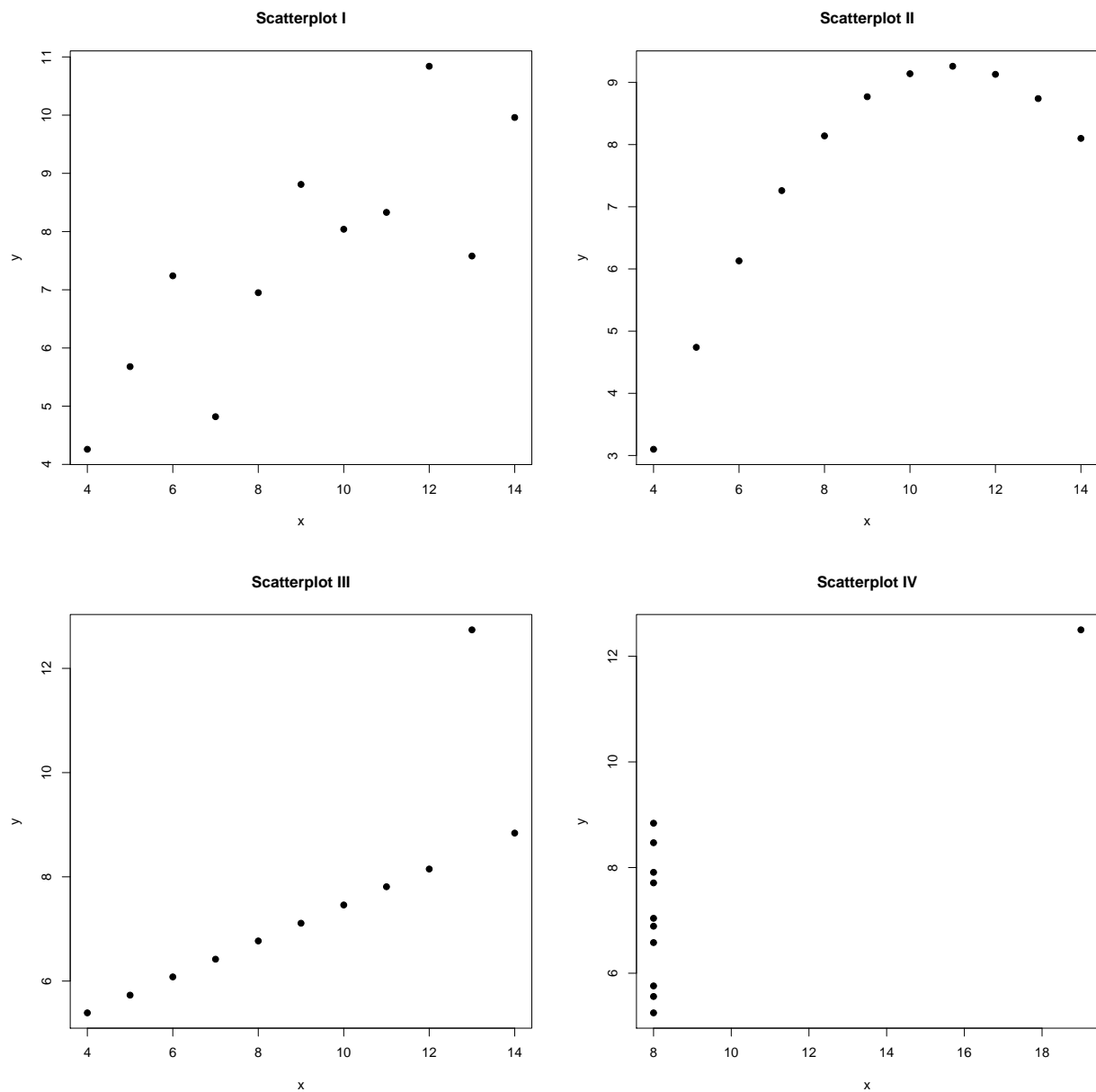It is not visible in the plots, that each of these has the same correlation and variance, as well as mean values for x and y.

(c)

Figure 1: Task 1 (b) - Scatter plots