Question (4)

Descriptive statistics can be given as –

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Soft_drink_consumed	8	1.00	25.00	10.6250	8.65097
BMI	8	18.00	38.00	27.0000	7.76439
Valid N (listwise)	8				

From the above output, we can say that mean number of soft drink consumed is 10.625 and standard deviation is 8.651, on the other hand the average BMI is 27 with standard deviation 7.764

The correlation coefficient output is given by –

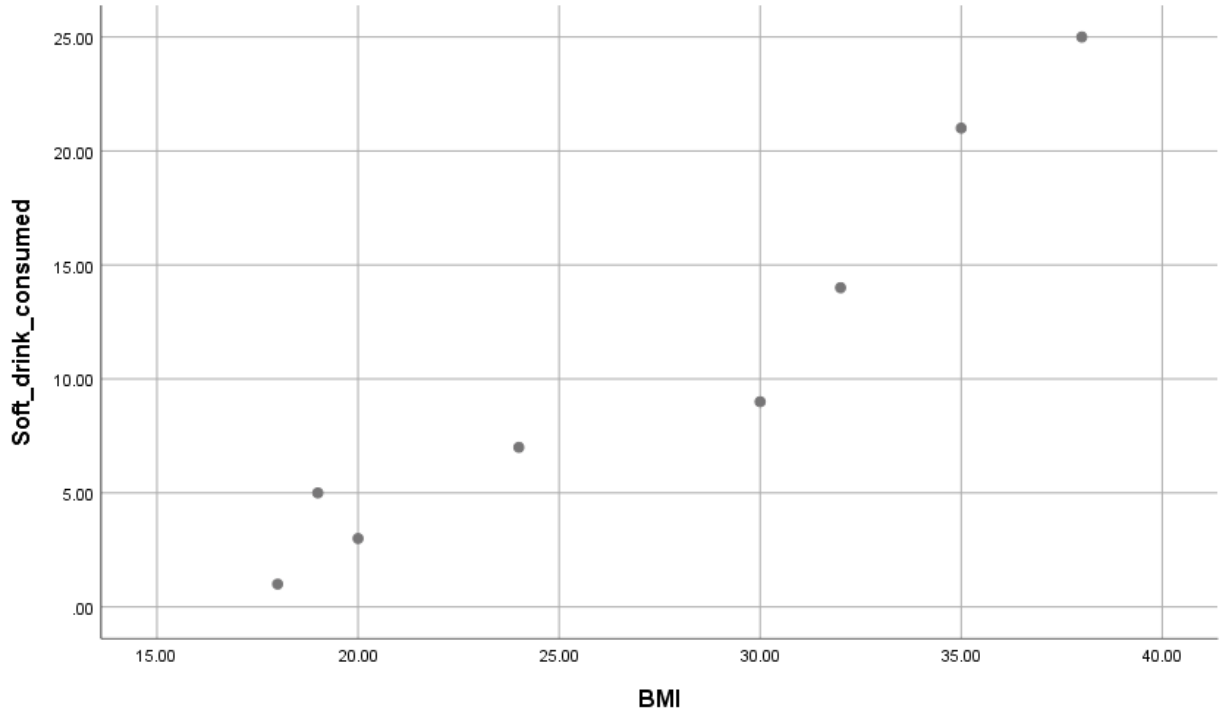
Correlations

		BMI	Soft_drink_consumed
BMI	Pearson Correlation	1	.955**
	Sig. (2-tailed)		.000
	N	8	8
Soft_drink_consumed	Pearson Correlation	.955**	1
	Sig. (2-tailed)	.000	
	N	8	8

**. Correlation is significant at the 0.01 level (2-tailed).

From the above output, we can say that the correlation between number of soft drinks consumed and BMI is 0.955, which indicates that there is a strong and positive relationship exists between BMI and number of soft drinks consumed. If the number of soft drinks consumed increases, the BMI also increases.

The scatterplot can be drawn as –



From the above output, we can see that there is an increasing trend, which indicates that there is a positive relationship between BMI and number of Soft drinks consumed. If one increases, other also increases.

Question (3)

The point Biserial correlation coefficient table is given by –

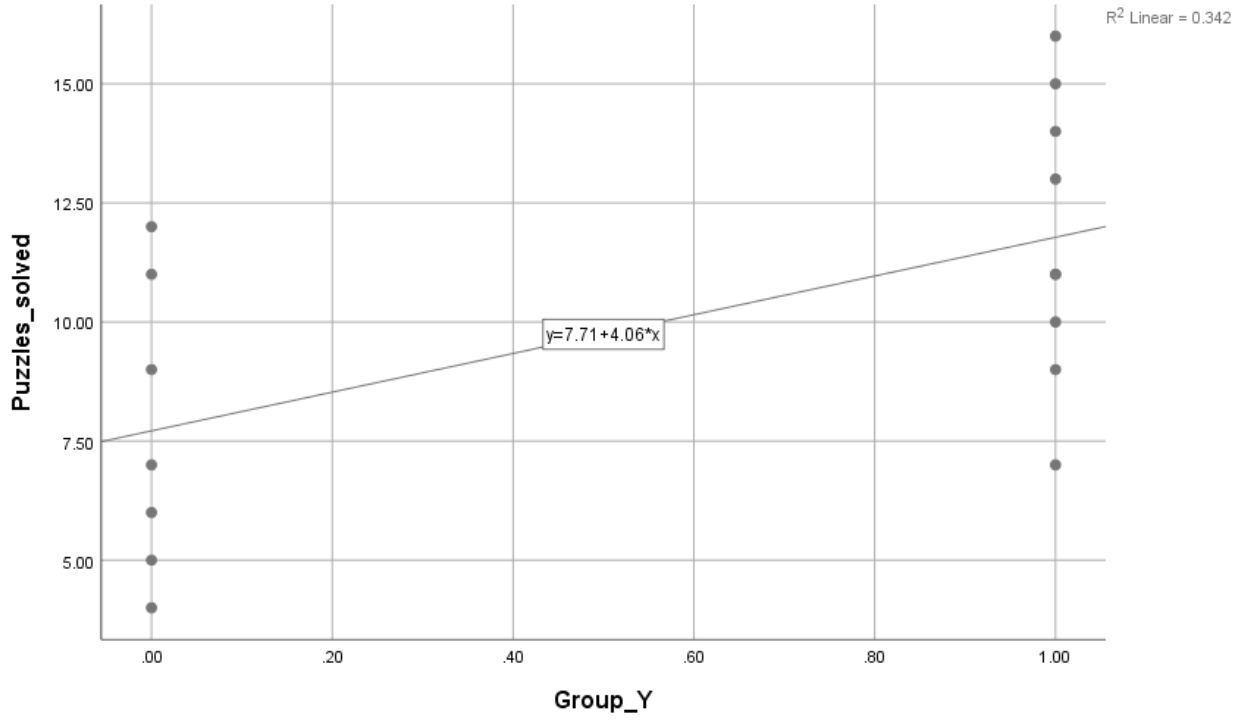
Correlations

		Group_Y	Puzzles_solved
Group_Y	Pearson Correlation	1	.585*
	Sig. (2-tailed)		.017
	N	16	16
Puzzles_solved	Pearson Correlation	.585*	1
	Sig. (2-tailed)	.017	
	N	16	16

*. Correlation is significant at the 0.05 level (2-tailed).

Point Biserial correlation coefficient is 0.585, which is positive and indicates that Group 1 solves more puzzles than group 0.

The scatter plot is given by –



From the above output, we can see that there is an increasing trend, which indicates that group 2 solves more number of puzzles than group 0.