Exercise 1: The following data is part of a sample of five individuals' answers to a particular questionnaire that was distributed to them (8Pts)

Questionnaire	Sex	Income level	Question 1: do you have the internet?
1	Male	300	yes
2	Male	350	No
3	Male	320	yes
4	Female	450	No
5	Female	600	No

- Enter the data into SPSS in **Variable View** and **Data View.**

Variable View

Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure
N	**Numeric**	**1**	**0**	**Questionnaire**	**None**	None	**8**	**Right**	**Scale**
Sex	**Numeric**	**1**	**0**	**Sex**	**"1=male; 2=Female"**	None	**8**	**Right**	**Nominal**
Income	**Numeric**	**3**	**0**	**Income level**	**None**	None	**8**	**Right**	**Scale**
Q1	**Numeric**	**1**	**0**	**Question 1: do you have the internet?**	**"1=yes; 2=No"**	None	**8**	**Right**	**Nominal**

Data View

	N	Sex	Income	Q1
1	1	Male	300	yes
2	2	Male	350	No
3	3	Male	320	yes
4	4	Female	450	No
5	5	Female	600	No

Exercise 2: The topic: **"The Impact of the Product Quality on Sales**." (5pts)

✓ Select the DV and IV (1PTS)

- **Dependent Variable (DV):** Sales
- **Independent Variable (IV):** Product Quality

✓ Write the S.L.R.E (2PTS)

$Y=\beta0+\beta1X+\epsilon$

For this topic:

Sales $(Y)=\beta0+\beta1$(Product Quality $(X))+\epsilon$

✓ Design a questionnaire for this topic (select the section's title of the questionnaire) (2PTS)

Section 1: General Information about the Research and Researcher

Section 2: General Questions about the Sample

Section 3: Questions about the Independent Variable (Product Quality)

Section 4: Questions about the Dependent Variable (Sales)

Section 5: Comments and Contact Information

Exercise 3: You are provided with the following outputs, which represent the results of a test examining **the effect of income on consumption**: (7pts)

Table (1): Model Summaryb

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.886a	0.785	0.771	7.718	2.405

- **a. Predictors:** (Constant), Consumption
- **b. Dependent Variable:** Income

Table (2): ANOVAb

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	3264.816	1	3264.816	54.814	0.000a
Residual	893.419	15	59.561		
Total	4158.235	16			

- **a. Predictors:** (Constant), Consumption
- **b. Dependent Variable:** Income

Table (3): Coefficientsa

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	B	**Std. Error**	**Beta**	
1 (Constant)	22.128	16.504		1.341
Consumption	1.069	0.144	0.886	7.404

- **b. Dependent Variable:** Income

Required**:**

1. **Explain the results of the above tables.**

Table 1: Model Summary

- **R (0.886):** Indicates a strong positive correlation between income and consumption.
- **R Square (0.785):** 78.5% of the variation in income is explained by consumption, showing a strong model fit.

Table 2: ANOVA

- **F-statistic (54.814):** Shows the overall significance of the model.
- **Sig. (0.000):** Indicates the model is highly significant ($p < 0.05$).

Table 3: Coefficients

- **Constant (22.128):** Represents the baseline income when consumption is zero.
- **Consumption Coefficient (1.069):** For every unit increase in consumption, income increases by 1.069 units.
- **Sig. (0.000):** Indicates that the coefficient for consumption is statistically significant ($p < 0.05$).

2. **What is the name of the test?**

The test is a **Simple Linear Regression Test**.

3. **Formulate the appropriate hypotheses for this test.**

Null Hypothesis (H0): No significant relationship exists between income and consumption.

Alternative Hypothesis (H1): There is a significant relationship between income and consumption.

4. **Test the formulated hypotheses.**

The p-value for the coefficient of consumption is **0.000**, which is less than the common significance level (α=0.05).

The calculated t-statistic is **7.404**, which is much greater than the critical t-value for 15 degrees of freedom (approximately 2.131 at α=0.05).

Thus, we **reject the null hypothesis** and conclude that there is a significant positive relationship between income and consumption.

Good Luck