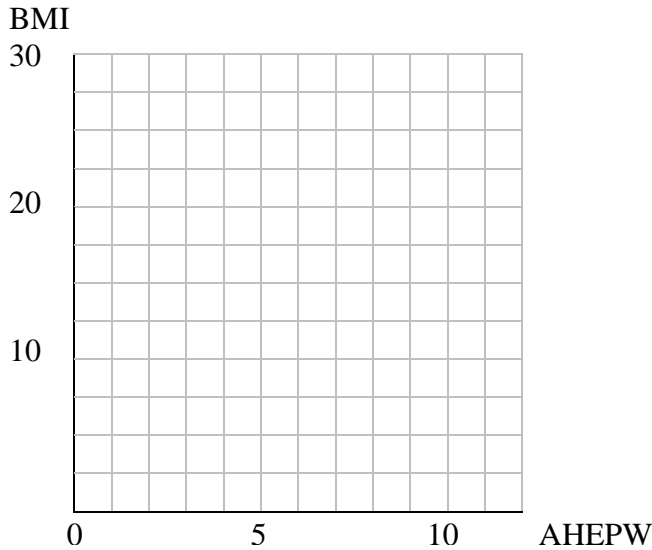


1. **Make a scatter plot** using the following data about Body Mass Index (BMI) and Average Hours of Exercise Per Week (AHEPW) observed from 5 men, and **describe the relation between the two variables.**

Subject ID	1	2	3	4	5
BMI	20	18	23	19	28
AHEPW	5	6	3	6	0

Describe the relation between the two variables in the following space.



2. The Pearson’s test for zero correlation was performed and the following table is the result from using SPSS for the test.

**Correlations**

		BMI	AHEPW
BMI	Pearson Correlation	1	-.996**
	Sig. (2-tailed)		.000
	N	5	5
AHEPW	Pearson Correlation	-.996**	1
	Sig. (2-tailed)	.000	
	N	5	5

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

- a) What is the Pearson correlation coefficient?
  
- b) At 5% level of significance, can we conclude the correlation between BMI and AHEPW is statistically significantly different from zero?

The means and standard deviations of BMI and AHEPW are calculated and they are in the following table:

	N	Minimum	Maximum	Mean	Std. Deviation
BMI	5	18.00	28.00	21.6000	4.03733
AHEPW	5	.00	6.00	4.0000	2.54951
Valid N (listwise)	5				

c) Use the correlation coefficient from the SPSS correlation test output in the previous page, and the descriptive statistics in the table above to find the **linear regression equation** for **estimating average BMI** using **AHEPW** variable.

d) Is it proper for us to use equation in a) to estimate average BMI for men AHEPW is 4?  
If yes, what would be the estimated average BMI?

e) Is it proper for us to use equation in a) to estimate average BMI for men AHEPW is 10?  
If yes, what would be the estimated average BMI?

f) Which of the two variables in the regression equation is the **explanatory variable** and which one is **response variable**?

Response variable \_\_\_\_\_

Explanatory variable \_\_\_\_\_