

NAME: \_\_\_\_\_ SCORE: \_\_\_\_\_



Objective:

Solve problems involving measures of position



TASKS



Study the data below and do the following tasks.

## SITUATION

A researcher conducted a study to examine the relationship between hours of study per week and exam scores among college students. The researcher collected data from a sample of 50 students and obtained the following results:

- Hours of study per week  $x_1=4, x_2=6, x_3=8, \dots, x_{50}=12$  (in hours)
- Exam scores:  $y_1=65, y_2=72, y_3=68, \dots, y_{50}=85$  (out of 100)

TASK	SOLUTION			
		IQR (hours of study)	exam scores e	
Calculate the mean, median, and mode of both the hours of study per week and the exam scores.	mean			
	median			
	mode			
Determine the range and interquartile range (IQR) of both the hours of study per week and the exam scores.	hours of study		exam scores	
	range	IQR	range	IQR
Compute the standard deviation and variance of both the hours of study per week and the exam scores.			hours of study	exam scores
	standard deviation			
	variance			
Construct a scatter plot to visually represent the relationship between hours of study per week and exam scores.				
Calculate the Pearson correlation coefficient to measure the strength and direction of the linear relationship between hours of study per week and exam scores. Give a conclusion.	Pearson r		Conclusion	