

## The Science of Economics

As with any investigative science, economics seeks to examine and explain naturally occurring phenomenon. Economics, in particular, seeks to explain phenomenon related to society's use of scarce resources. So just what do economists do? Often, they observe their environment with the goal of identifying relationships between different phenomena. For example, one might note that the more a person smokes cigarettes, the less healthy they tend to be. A scientist would attempt to collect data to confirm this observation. After that, he/she would attempt to explain the relationship. The data itself does not explain a relationship, it only identifies it. (Are smokers less healthy because smoking is bad for them, or because they are too busy smoking to exercise properly?) Before an idea is scientifically explained, it is called a hypothesis. In order to explain a relationship, scientists will conduct tests designed specifically to either confirm or refute a hypothesis. If scientists can successfully explain a relationship between phenomena, they gain an understanding of how a system operates. Once a scientist has an idea of how a system operates, the better she will be able to manipulate that system for the benefit of society.

Let's try making you a scientist for a moment. Think about a particular social phenomenon that you believe to exist in our society. Now, collect data from your classmates to see if a relationship does in fact exist between two different variables. Try to collect data regarding quantitative variables. In other words, avoid asking questions which would elicit a "yes/no" response from your test subjects. (Example: "Do you study after school?") Rather, try formulating your questions so that you collect responses which indicate a quantity. (Example: "How many hours do you study after school?")

Once you have collected your data you will analyze it for a relationship between the two variables which you are investigating. You will then illustrate your findings to the class. You can even attempt to explain any relationship which you might identify.



## Organizing the Data

Subject	Variable A:	Variable B:

## Correlation Analysis

The correlation between the two variables is:

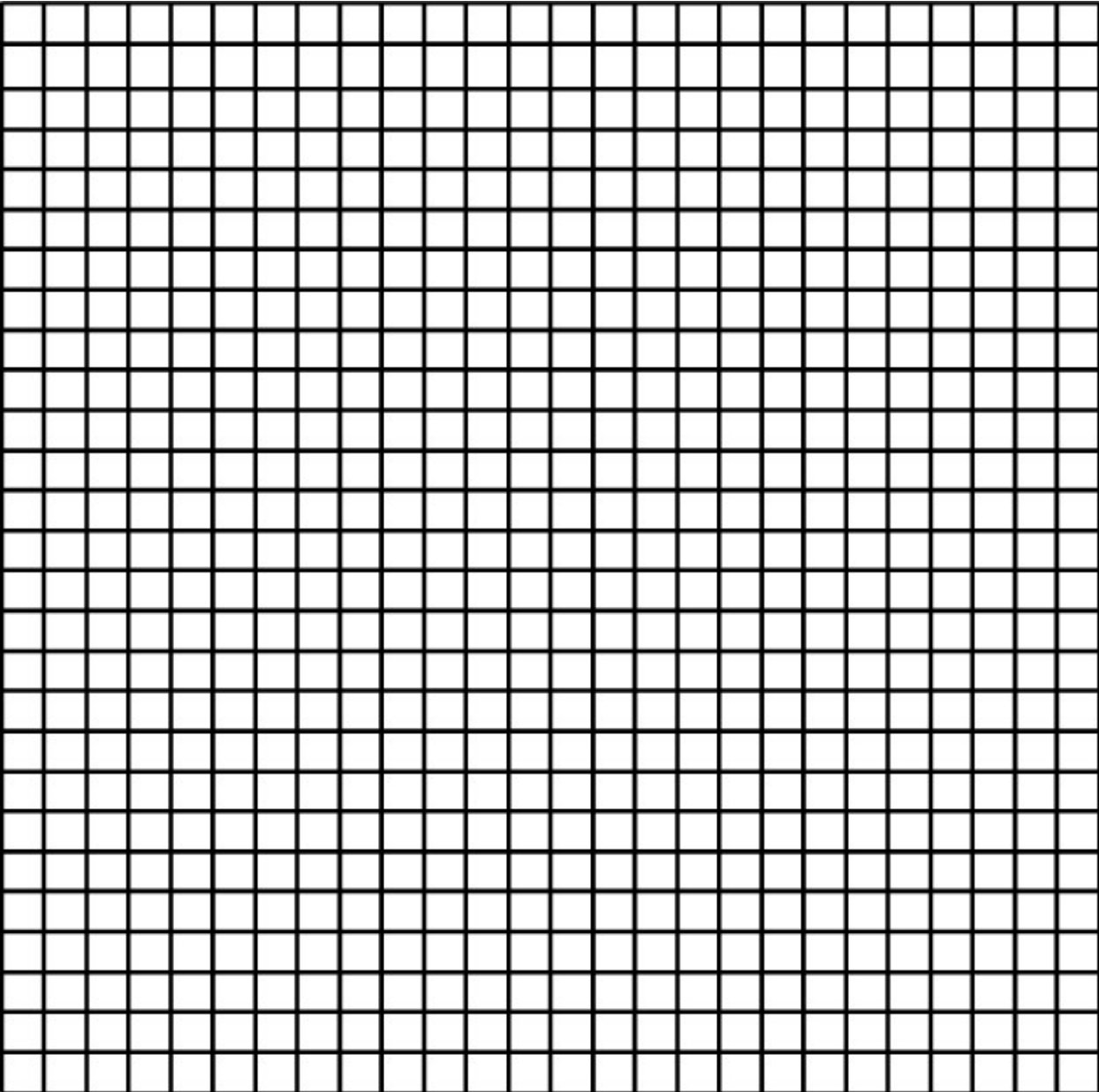
positive

negative

split effect

undefined

**Presenting the Data**



## Analyzing the Data

1. Did the correlation between your two variables illustrate what you expected it would? How so?

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2. What different explanations can you think of that might explain the relationship which you discovered between your two variables?

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3. How might one go about exploring and explaining the relationship which you have identified between your two variables?

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