**Scatterplots**

Key Points

* A scatterplot illustrates the relationship between \_\_\_\_\_\_\_\_\_\_\_ sets of data.
* A scatterplot consists of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ represent the measures of the two attributes of the point.
* Scatterplots can be used to predict \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and estimate a line of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* In a scatterplot, each point is represented by an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ variable.
* The independent variable is graphed on the\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ axis and the dependent is graphed on the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ axis.

**Types of Relationships**

Draw an example of each:

Positive Negative No

Relationship/Correlation Relationship/Correlation Relationship/Correlation

As x \_\_\_\_\_\_\_\_\_\_\_\_, As x \_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_ obvious

y \_\_\_\_\_\_\_\_\_\_\_\_\_ y \_\_\_\_\_\_\_\_\_\_\_\_\_\_ pattern

**Determine whether a scatter gram of the data for the following might show a *positive*, *negative*, or *no* trend. Explain your answer.**

1. **shoe size and math test score**

MCj02860060000[1]

1. **height of basketball player and number of rebounds**
2. **outside temperature and heating bill**
3. **eye color and test score**

MCj01509270000[1]

1. **time spent studying for test and test score**

Use the data to make a scatterplot. Then draw a line of best fit and answer the questions.

Eight graders were asked how much time they spent studying/doing homework and how much time they spent watching TV on one day. The results are listed below.

|  |  |
| --- | --- |
| Time spent  watching TV | Time spent  studying/  doing hw |
| 2 hours | 30 minutes |
| 1 hours | 2.5 hours |
| 0 hours | 3 hours |
| 30 minutes | 1 hour |
| 30 minutes | 1.5 hours |
| 4 hours | 15 minutes |
| 3 hours | 30 minutes |

1. Is there a relationship between time spent watching TV and time spent studying and doing homework? Explain.
2. If a student spent 4 hours studying, how much time might they have spent watching TV? Explain.