Lesson 19

NAME:

Patterns in Linear Scatter Plots

Start by navigating to the Online Lesson for instructions.

Objectives

- Determine the correlation of a linear scatter plot
- Describe the correlation meaning in context.

Why?

Scatter plots represent real-life data in a graphical representation that allows us to draw conclusions, make predictions, and prepare for likely outcomes. Determining the trend, or correlation, of data represented in a scatter plot allows us to see the relationship between the two variables.

Explore

Patterns in Linear Scatter Plots

Fill in the notes as you watch the video in the Online Lesson.

- A _____ is a graph that visually represents a set of data that pairs _____ and _____ variables to form a correlation.
- The trend, or _____, is a relationship between two variables or two data sets.

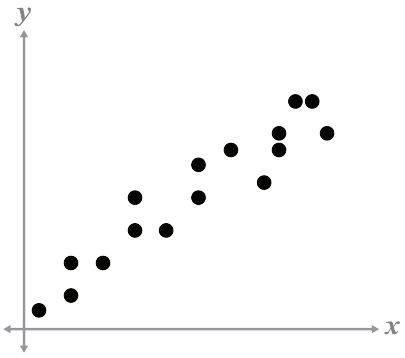
There are three types of correlation.

- _____ correlation
- _____ correlation
- _____ correlation.

- Positive correlation: As x _____,

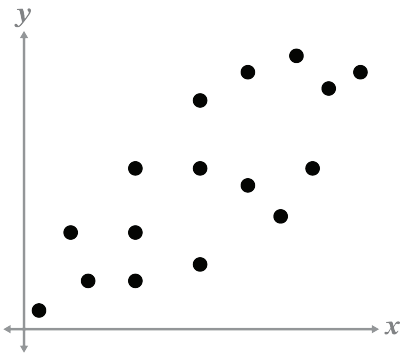
  y _____.

- Strong positive correlation:



  - The ordered pairs are close to each other.

- Weak positive correlation:

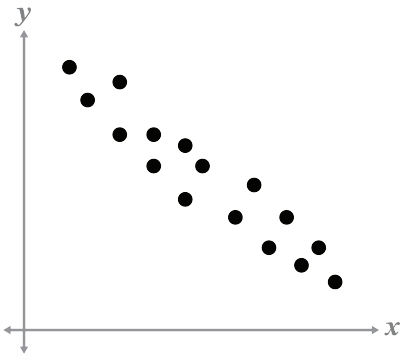


  - The ordered pairs are more spread apart.

- Negative correlation: As x _____,

  y _____.

- Strong negative correlation:

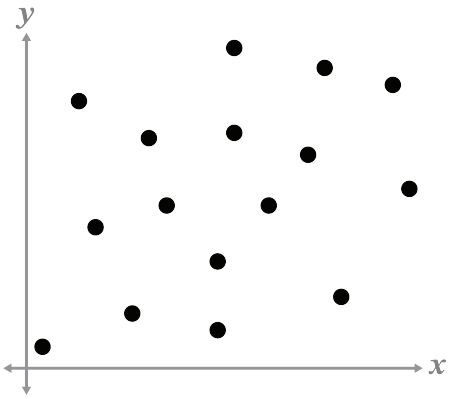


  - The ordered pairs are close together.

- Weak negative correlation:

  - The ordered pairs are more spread apart.

- No correlation: There is _____ between the variables.



- To describe the correlation, determine _____ the independent variable _____ the dependent variable (if at all).

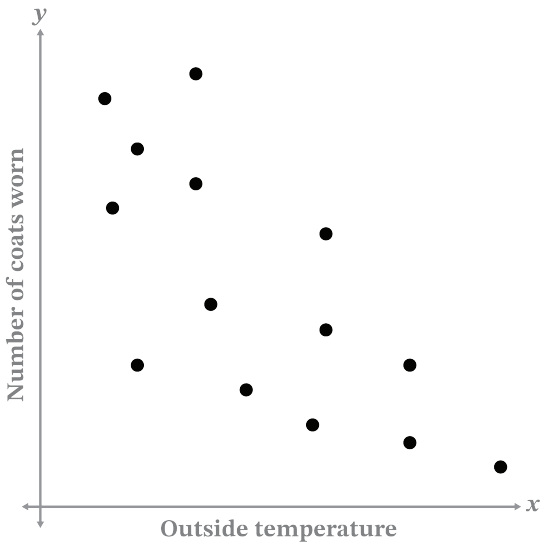
- Complete the sentence: As the independent variable increases, the dependent variable [increases/decreases/no effect].

Example 1

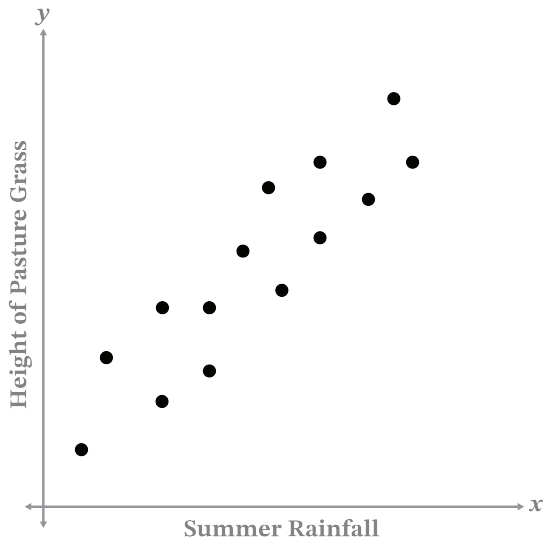
Complete the example as you watch the video in the Online Lesson.

Determine the correlation. Describe the correlation meaning in context.

A)



B)



Example 2

Complete the example as you watch the video in the Online Lesson.

Determine the correlation as positive, negative, or no correlation. Describe the correlation meaning in context.

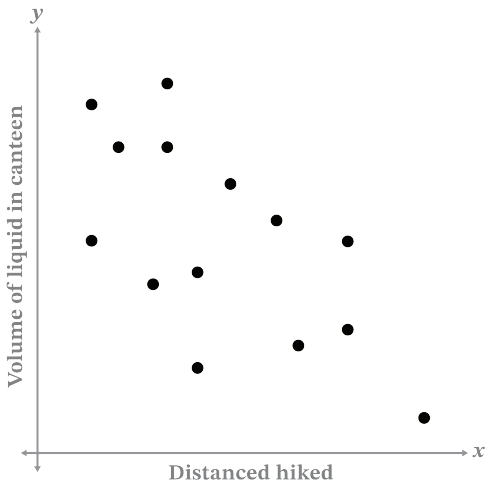
A) Length of hair and number of books read.

B) Height and shoe size.

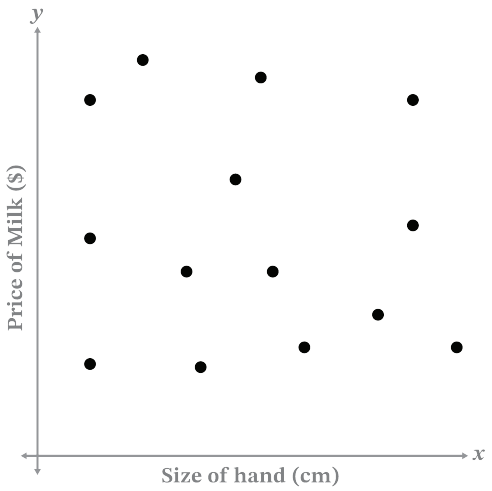
Practice

Determine the correlation. Describe the correlation meaning in context.

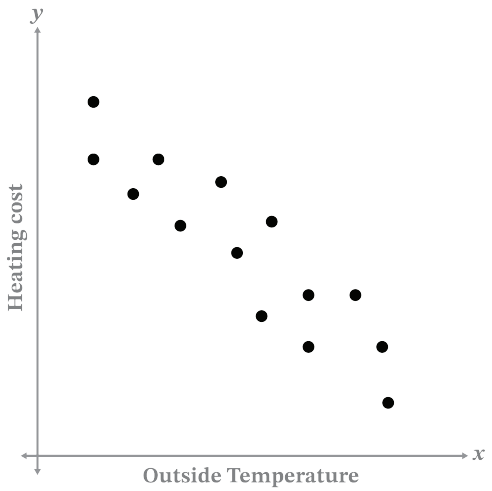
1)



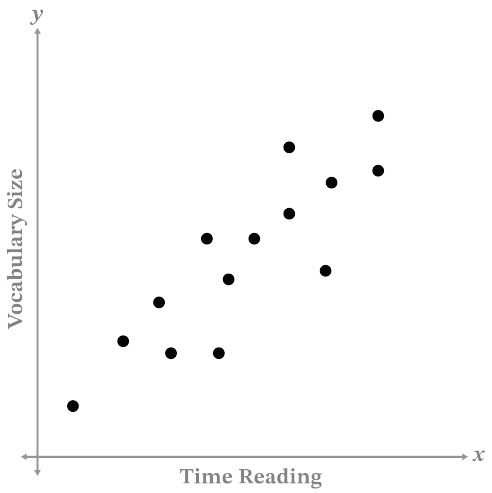
2)



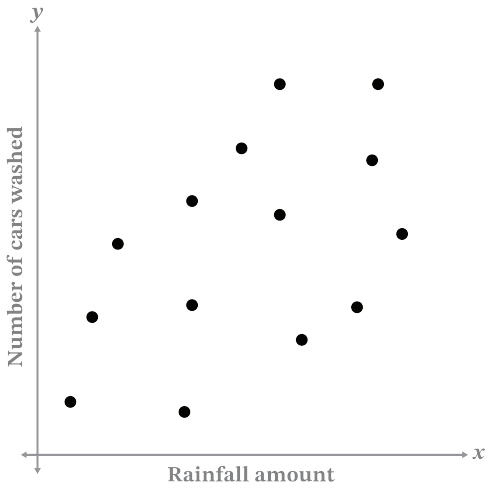
3)



4)



5)



Determine the correlation as positive, negative, or no correlation. Describe the correlation meaning in context.

6) The amount of time a person spends looking at a screen and the total number of steps they take during a day.

7) The number of hours a class studies and their exam score.

Determine the correlation as positive, negative, or no correlation. Describe the correlation meaning in context.

8) The number of products sold and a company's revenue (the total money earned).

9) A car's engine size and its gas mileage (amount of gas used per mile).

10) The number of letters in a town's name and the number of pets a person owns.

11) The age of a car (excluding classic and collector's cars) and its resale value.

12) The distance a person runs and the amount of calories burned.

To continue, return to the Online Lesson.