

Lesson 10.2: Scatter Plots

Targets

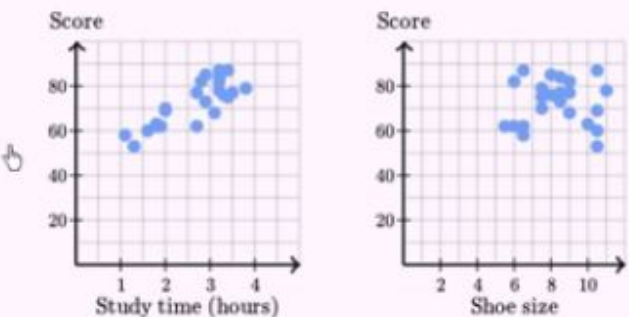
1. I interpret scatter plots.
2. I can construct scatter plots.

Shoe Size and Test Scores

Watch this video and copy the notes here:

The graphs below show the test grades of the students in Dexter's class. The first graph shows the relationship between test grades and the amount of time the students spent studying, and the second graph shows the relationship between test grades and shoe size.

Choose the best description of the relationship between the graphs.



Answer

- There is a *negative linear relationship* between study time and score, and a *positive linear relationship* between shoe size and score.
- There is a *nonlinear relationship* between study time and score, and a *negative linear relationship* between shoe size and score.
- There is a *positive linear relationship* between study time and score, and *no relationship* between shoe size and score.
- Both graphs show positive linear trends of approximately equal strength.

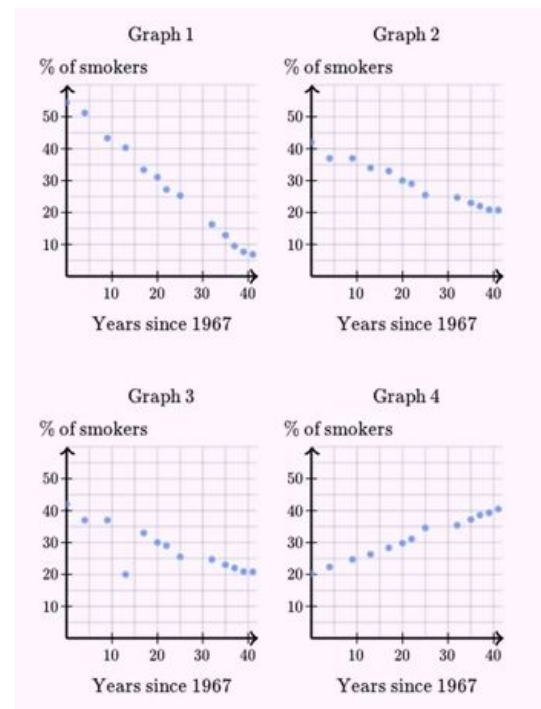
People Smoking Less Over Time

First attempt this problem on your own. Then watch the video and copy his notes.

The percent of adults who smoke, recorded every few years since 1967, suggests a negative linear association with no outliers. On average, the percent drops by 0.5 point each year.

- Which of the following plots suits the above description?

- Explain why that graph is the best option.



Khan Activity: Describing Trends in Scatter Plots

Complete this activity on Khan.

People Smoking Less Over Time

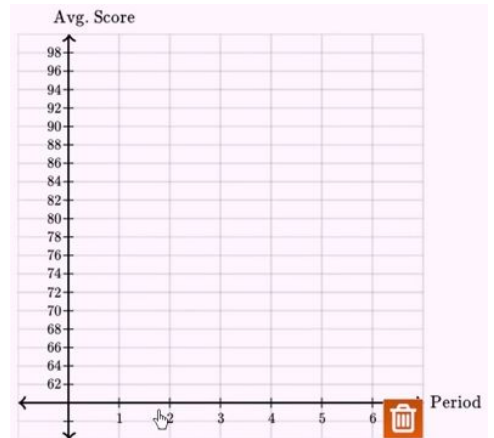
First attempt this problem on your own. Then watch the video and copy his notes.

Aubree wanted to see if there is a connection between the time a given exam takes place and the average score of this exam.

She collected data about exams from the previous year.

Plot the data in a scatter plot.

Class	English	Math	History	Computer Science	Arts	Biology	Physics	Chemistry	Spanish
Period	1	6	2	4	4	1	3	1	3
Average Score	93	87	70	62	86	73	73	80	96



Constructing Scatter Plot Exercise Example

First attempt this problem on your own. Then watch the video and copy his notes.

Arthur wanted to investigate how the amount of exercise he does affects his weight. Each week he recorded the number of hours he exercised during the past week and the change in his weight during that week (positive number means he gained weight, negative means he lost weight).

Suppose Arthur wants to create a scatter plot according to the data, presented below.

Complete the sentences below.

The amount of *exercise* should go on the axis.

The range of that axis should be from to .

Exercise (hours)	Weight change (lb)
3.1	0.6
3.3	0.8
0.3	1.2
8.9	-1.7
8.4	-1.9
1.3	1.9
6.5	-0.3
5.8	0
7.7	-0.2
8	-1.3
3.1	1.1
4.9	0.4

Khan Activity: Constructing Scatter Plots

Complete this activity on Khan.

Exit Ticket

1. Have all your notes filled out above.
2. Complete the following Khan Academy Activities:
 - a. Describing Trends in Scatter Plots
 - b. Constructing Scatter Plots