**CCM8 Creating Scatter Plots**

To create a scatter plot you have to start with a coordinate plane. A coordinate plane has an x and y axis and is used for graphing bivariate data. Bivariate data is data that has \_\_\_\_\_\_\_ variables.



Example 1:

Data that relates the number of pets a student has to the

average number of texts that they send each day.

Create a scatter plot.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Student | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Number of Pets | 2 | 1 | 0 | 3 | 2 | 5 | 3 | 0 | 1 | 4 |
| Number of Texts | 60 | 50 | 20 | 45 | 0 | 10 | 15 | 70 | 30 | 55 |



Example 2:

This data is from a survey that asked students how long they

spent on math homework every night and their grade in math

class. Create a scatter plot.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Student | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Time in Minutes | 20 | 30 | 0 | 40 | 25 | 15 | 10 | 45 | 30 | 25 |
| Math Grade | 87 | 90 | 60 | 91 | 87 | 85 | 80 | 94 | 95 | 93 |

Example 3:

Data was collected from a local group that meets once a month

 to clean up trash at a local park. They recorded the amount of

time that it took to clean up the park and the number of volunteers

that they had working that day. Create a scatter plot.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Number of workers | 10 | 8 | 7 | 12 | 5 | 8 | 6 | 9 |
| Time in hours | 4 | 2.1 | 2 | 1.6 | 2.6 | 2 | 2.4 | 1.9 |

Example 4:

Data was collected over the years to keep track of how many tons of material was recycled each year. Create a scatter plot.

Source: <http://www.epa.gov/epawaste/facts-text.htm#chart3>

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Year | 1960 | 1965 | 1970 | 1975 | 1980 | 1985 | 1990 | 1995 | 2000 | 2005 | 2010 |
| Recycled Material | 5.6 | 6.5 | 8.0 | 9.3 | 14.5 | 16.7 | 33.2 | 55.8 | 69.5 | 79.9 | 85.1 |





**Independent Practice**

1. Data from the first 10 games for a baseball team is

provided in the table. Create a scatter plot.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Game | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Hits | 10 | 8 | 15 | 18 | 12 | 9 | 7 | 9 | 14 | 15 |
| Runs Scored | 4 | 3 | 7 | 6 | 5 | 4 | 1 | 2 | 8 | 6 |

1. Data from the first 10 games for a basketball team is

provided in the table. Create a scatter plot.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Game | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Turnovers | 10 | 15 | 8 | 12 | 14 | 10 | 11 | 13 | 9 | 20 |
| Points | 60 | 48 | 60 | 55 | 56 | 59 | 61 | 54 | 63 | 40 |

1. Data that gives a bean plant’s height per day.

Create a scatter plot.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Day | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Height (cm) | 0 | 3.1 | 5.3 | 6.2 | 8.7 | 12.0 | 15.5 | 16.4 | 18.2 | 18.9 | 19.2 |

1. Data that shows the population in Wake County since 1960. Create a scatterplot.

(source: <http://www.wakegov.com/planning/demographic/documents/trends2012.pdf>)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Year | 1960 | 1970 | 1980 | 1990 | 2000 | http://classy5sl.edublogs.org/files/2011/09/1st-quad-10oovwm.png2010 |
| Population | 169,082 | 238,453 | 301,327 | 423,380 | 627,846 | 900,993 |