(3.1) One-Variable and Two-Variable Data

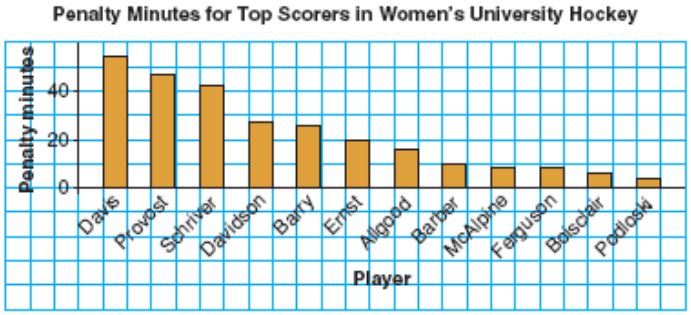
Interpreting and Comparing Data:

The graphs and table below contain information from the Canadian Women's University Hockey League from 2006-2007. Write a question that could be answered by using the:

a) bar chart _____

b) scatter plot _____

c) table _____



Player	Games played	Goals	Assists	Points	Penalty minutes
Lindsay McAlpine	24	27	30	57	8
Tarin Podloski	22	19	31	50	4
Marième Provost	21	26	21	47	47
Valerie Boisclair	21	20	21	41	6
Jenna Barber	24	20	20	40	10
Courtney Schriver	21	19	16	35	42
Christina Davis	20	16	17	33	54
Candice Ernst	18	9	24	33	20
Kate Allgood	24	11	20	31	16
Brayden Ferguson	19	17	14	31	27
Vanessa Davidson	17	15	16	31	27
Taryn Barry	24	11	19	30	26

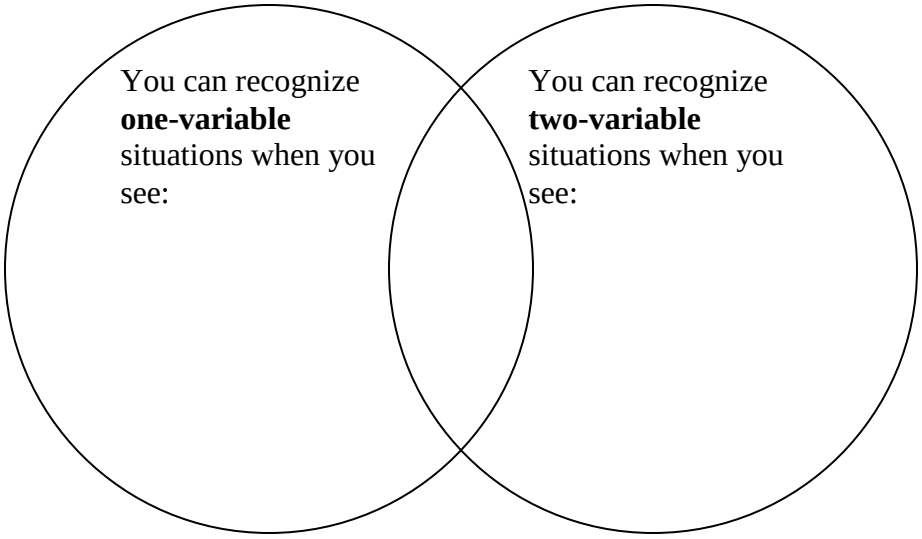
Which graph(s) display(s) two-variable data? How do you know?

One-Variable Data vs. Two-Variable Data:

Variable: an attribute that can be measured.

One Variable Data Sets: give measures of one attribute (ex. Eye colour, height, or grade).

Two Variable Data Sets: give measures of two attributes for each item in a sample (ex. Eye colour and hair colour, height and weight, or grade and gender).



Note: One-variable data sets can be analyzed using the mean, median or mode.

To distinguish between situations involving One and Two-Variable Data:

- Determine how many variables are mentioned.
- If more than one variable is mentioned, ask yourself whether each variable could be measured separately or not.

To decide which type of graph to use to represent a set of data:

- Determine if the data set is one-variable or two-variable.
- Use Bar Graphs, Circle Graphs, or Pictograms for one-variable discrete or categorical data.
- Use Histograms for continuous one-variable data.
- Use scatter plots for two-variable data.

Example: Circle the correct type of variable data for each situation. Then write how you would represent this type of data (ie. what type of table or chart you would use).

a) Lenny collects information on hours students work in a week and rate of pay for each student.
One-Variable **Two-Variable** _____

b) Norma asks the students in her law class whether they believe in capital punishment or not.
One-Variable **Two-Variable** _____

c) Regis collects statistics on how many hours contests of Who Wants to be a Millionaire spend reading, and how many minutes it takes them to answer a question.
One-Variable **Two-Variable** _____

d) Zutroy collects information on his overall averages and how much water he drinks in a day.
One-Variable **Two-Variable** _____

e) Garth catalogues how many minutes of music are on each of his CD's.
One-Variable **Two-Variable** _____

f) Mickey investigates how many hours each of his friends spend playing outside each day.
One-Variable **Two-Variable** _____

g) A physicist measures the gravitational pull of each planet and the mass of each planet.
One-Variable **Two-Variable** _____

h) Pat collects information on gender from a group at a conference on civil rights.
One-Variable **Two-Variable** _____

i) Norm measures how much beer each of his friends drinks and how often they go the bathroom a day.
One-Variable **Two-Variable** _____

j) Kelsey weighs each of her textbooks in kilograms.
One-Variable **Two-Variable** _____

Tally Charts

Histograms

Frequency Tables

Ordered Pairs

Scatter Plots

Pictograms

Circle Graphs

Table of Values

Bar Graphs