9.1 Statistical Surveys —Intro and review of grades 7,8

Population: the complete set of objects or persons that are being considered in a survey

Sample: a subset of the population.

Variables (data): What is being surveyed. (annual income, eye colour, age, height, shoe size…)

> Quantitative variables: Ones that can be measured numerically. Ex: Age, height, weight.

  i) Discrete variables: Variables that have separate values (often integer values)

     (# of goals in a hockey game, Shoe size 9, 9 ½ , 10…)

  ii) Continuous variable: Ones that can be any real number within an interval

     (time it takes to run 100m)

> Qualitative variables: Ones that don't have a numerical value. Ex: Eye colour

Census: Statistical survey where **all** of the population is being surveyed.

     Canada has a census every ten years…. Every person in Canada is counted.

Poll: Survey where a **sample** is studied to infer information about the population being studied.

     A group of students at a university are asked which night of the week they party the most often

Study: A statistical survey where **experts** in the field being studied are surveyed

     ("4 out of 5 Dentists prefer X brand of toothpaste" is a study.)

Bias: Any error involved in a statistical survey. There are several sources… basically… why is it not a good survey….

 Types of Bias:

- Choosing a sample: Don't poll a Seniors retirement home about what activities Senior Citizens partake in. (Seniors in a home are probably less active than those who still live at home)

- Bad Questions: Vague or misleading such as, "Are you a heavy drinker?" Define Heavy.

- Non Random Sampling: Time and place. Asking random spectators at the Olympic Games in Vancouver if they smoke. (perhaps people interested in sports are less likely to smoke)

- Errors in processing data: tabulating results can lead to an error.

- Errors in Analysis of data: Making assumptions, (like discounting undecided voters before an election … maybe they are decided… just don't want to tell you)

Look over Activity 1 on P 256. Check your answers.

Practice: P 257 # 1-4,   P 259 # 5