

**University of Guelph
Numeracy Project**

About Variables: Examples



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About Variables: Examples

Categorical

Categorical Variables

- ▶ We can categorize individuals by gender, eye colour or hair colour. We can also categorize people based on what they say is their favourite radio station.

Nominal Variables

- ▶ Consider the example of political parties: Liberal, NDP, Conservative, Bloc Quebecois, Green Party.
- ▶ Car model: Audi TT™, Quattro™, A4™
- ▶ Cookie brand: Dad's™, Mr. Christie™, Kraft™, Voortman™
- ▶ Gender: female, male, other
- ▶ Eye colour: brown, blue, green, grey
- ▶ Hair Colour: brown, blonde, red, grey

Ordinal Variables

- ▶ Consider the example of comparative temperature: cold, cool, warm, hot. There is no indication what the difference is between each level.
- ▶ Likert Scales
- ▶ Degrees of heat: cold, cool, warm, hot
- ▶ Standings in a hockey pool
- ▶ Ordering of your favourite wine from most favoured to least favoured

Measurement

Measurement Variables

- ▶ We can order individuals based on the score they obtained on a statistics test.

Interval Variables

- ▶ Whether measured in Celsius or Fahrenheit, temperature has an equal interval between each degree. While temperature does have a zero point (i.e. 0°F/ 0°C), this is an arbitrary zero point, as it does not indicate a lack of temperature.
- ▶ Annual income of professional basketball players (assumes that all players in the sample made some income)

Ratio Variables

- ▶ Consider the example of pulse, which has an equal interval between each measure, and has an absolute zero point (i.e. no pulse).
- ▶ Width of statistics textbooks
- ▶ Kelvin Scale (unlike the Fahrenheit and Celsius scales, the Kelvin scale has an absolute zero point, where 0 is the point at which molecular activity ceases)
- ▶ Pulse
- ▶ Age
- ▶ Number of years at a certain residence