

MAT 223, Discussion Questions 8.26

1. Give five examples of qualitative data that you could collect from your coworkers.

answers will vary:

job title, marital status, do they like their boss?,
gender, gender identity, etc.

2. Give five examples of quantitative data that you could collect about your students.

age, score on their last test, height, weight
of siblings, etc.

answers will vary,

3. Give two examples of quantitative data that is discrete.

of siblings, # of distinct passwords you use

answers will vary.

4. Give two examples of quantitative data that is continuous.

age, income, height

answers will vary

5. Give two examples of data that is nominal (level of measurement).

answers will vary

gender, last degree earned

6. Give two examples of data that is ordinal (level of measurement).

Likert scale, letter grades

answers will vary

7. Give two examples of quantitative data that is interval (level of measurement).

temperature, SAT scores

answers will vary

8. Give two examples of quantitative data that is ratio (level of measurement).

of siblings, income, height

answers will vary

9. For each of the following variables, determine if they are: a) qualitative or quantitative, b) if it is quantitative, is it discrete or continuous, c) is the level of measurement nominal, ordinal, interval or ratio (give the highest level it could be).

- i. Temperature in Fahrenheit *quantitative, continuous, interval*
- ii. Numbers on soccer players' jerseys *qualitative, nominal*
(not ordered)
- iii. Hair colour *qualitative, nominal*
- iv. GPA *quantitative, continuous, interval*
- v. Height of buildings *quantitative, continuous, ratio*
- vi. Degrees on a compass needle *quantitative, continuous, interval*
- vii. Age *quantitative, continuous or discrete, ratio*
(depends)
- viii. Time spent running a maze *quantitative, continuous, ratio*
- ix. Gender *qualitative, nominal*

x. Skin cancer risk (expressed as high, low, etc)
quantitative or qualitative
(if expressed as % chance) ↑ ordinal
Continuous, ratio

10. What is the purpose of an institutional review board?

to ensure that ethical standards are met
when conducting experiments on people
i.e. protect subjects in a study.

11. Read the article at <http://m.phys.org/news/2015-08-parents-math-anxiety-undermine-children.html> and write a short paragraph explaining how it related to the material in sections 1.2 and 1.3.