Week 1 Assignment Variables and Measures of Data Q and A

1. **Which of the following best describes the term explanatory variable?**

Select the correct answer below:

○ the dependent variable in an experiment

○ a value or component of the independent variable applied in an experiment

○ a variable that has an effect on a study even though it is neither an independent nor a dependent variable

◉ <mark>the independent variable in an experiment</mark>

2. **Which of the following best describes the term *qualitative*?**

Select the correct answer below:

○ a numerical characteristic of the sample

○ the type of data that is the result of measuring

○ the type of data that is the result of counting

◉ <mark>an attribute whose value is indicated by a label</mark>

3. **A zoologist measures the birthweight of each cub in a litter of lions. What is the level of measurement of the data?**

Select the correct answer below:

○ nominal
○ ordinal
○ interval
◉ <mark>ratio</mark>

4. **Margaret is investigating if gender has any effect on political party associations. What is the response variable?**

Select the correct answer below:

◉ <mark>political party associations</mark>
○
gender
○
the number of people that are being studied
○
none of the above

5. Timothy is collecting data on number of dental cavities. What type of data is this?

Select the correct answer below:

○ qualitative data
◉ <mark>discrete quantitative data</mark>
○ continuous quantitative data
○ none of the above

6. To determine whether or not number of siblings influences grade point average, Charles has designed a survey. What is the explanatory variable?

Select the correct answer below:

◉ <mark>number of siblings</mark>
○ grade point average
○ the number of people surveyed
○ none of the above

7. What is the type of quantitative data that is the result of measuring?

Select the correct answer below:

○ qualitative
○ statistic
○ discrete
◉ <mark>continuous</mark>

8. A new mother keeps track of the time when her baby wakes up each morning. What is the level of measurement of the data?

Select the correct answer below:

○ nominal
○ ordinal

- ◉ <mark>interval</mark>
- ○ ratio

9. A response variable is the dependent variable in an experiment.

Select the correct answer below:

- ◉ <mark>True</mark>
- ○ False

10. Discrete data is the type of quantitative data that is the result of counting.

Select the correct answer below:

- ◉ <mark>True</mark>
- ○ False

11. A political researcher asks people if they Strongly Disagree, Disagree, Agree, or Strongly Agree with various policy decisions. What is the level of measurement of the data?

Select the correct answer below:

- ○ nominal
- ◉ <mark>ordinal</mark>
- ○ interval
- ○ ratio

12. Which of the following best describes the term response variable?

Select the correct answer below:

- ○ the independent variable in an experiment
- ○ a variable that has an effect on a study even though it is neither an independent nor a dependent variable
- ◉ <mark>the dependent variable in an experiment</mark>
- ○ a value or component of the independent variable applied in an experiment

13. A climate scientist keeps track of the daily temperature, in degrees Fahrenheit, of a lake over the course of six weeks. What is the level of measurement of the data?

Select the correct answer below:

- ○ nominal

○ ordinal
◉ <mark>interval</mark>
○ ratio

14. Given that Ruth is collecting data on political party preference, what type of data is she working with?

Select the correct answer below:

◉ <mark>qualitative data</mark>
○ discrete quantitative data
○ continuous quantitative data
○ none of the above

15. Janice is investigating if grade level has any effect on time spent studying. What is the explanatory variable?

Select the correct answer below:

○ time spent studying
◉ <mark>grade level</mark>
○ the number of people that are being studied
○ none of the above

16. A restaurant surveys its patrons to find their favorite item on the menu. What is the level of measurement of the data?

Select the correct answer below:

◉ <mark>nominal</mark>
○ ordinal
○ interval
○ ratio

17. Which of the following is the independent variable in an experiment?

Select the correct answer below:

○ lurking variable
◉ <mark>explanatory variable</mark>
○ response variable
○ treatment

18. **Angela is collecting data on the number of classes that students take. What type of data is this?**

Select the correct answer below:

○ qualitative data

◉ <mark>discrete quantitative data</mark>

○ continuous quantitative data

○ none of the above

19. **A pollster surveys voters and asks which candidate they support in the upcoming election. What is the level of measurement of the data?**

◉ <mark>nominal</mark>

○ ordinal

○ interval

○ ratio

20. **Given that Janet is collecting data on favorite sports teams, what type of data is she working with?**

Select the correct answer below:

◉ <mark>qualitative data</mark>

○ discrete quantitative data

○ continuous quantitative data

○ none of the above

21. **To determine whether or not grade level influences time spent studying, Samuel has designed a survey. What is the response variable?**

Select the correct answer below:

○ grade level

◉ <mark>time spent studying</mark>

○ the number of people surveyed

○ none of the above

22. **A chef keeps track of the temperature of his refrigerator in degrees Celsius. What is the level of measurement of the data?**

Select the correct answer below:

○ nominal
○ ordinal
◉ <mark>interval</mark>
○ ratio

23. **What term best describes data that is an attribute whose value is indicated by a label?**

Select the correct answer below:

○ discrete
○ quantitative
○ statistic
◉ qualitative

24. **Karen is investigating if age has any effect on political party preferences. What is the explanatory variable?**

Select the correct answer below:

○ the number of people that are being studied
◉ <mark>age</mark>
○ political party preferences
○ none of the above

25. **A market researcher surveys households to ask what brand of shampoo is preferred. What is the level of measurement of the data?**

Select the correct answer below:

◉ <mark>nominal</mark>
○ ordinal
○ interval
○ ratio

26. **Thomas is investigating if gender has any effect on political party associations. Which of the following gives the explanatory and response variables respectively?**

○ the number of people that are being studied and political party associations
○ the number of people that are being studied and gender
◉ <mark>gender and political party associations</mark>
○ political party associations and gender

27. Given that Angelina is collecting data on commute distance, what type of data is she working with?

Select the correct answer below:

○ qualitative data

○ discrete quantitative data

◉ <mark>continuous quantitative data</mark>

○ none of the above

28. A restaurant asks its patrons to rate the speed of the service. The options are Very Slow, Somewhat Slow, Somewhat Fast, Very Fast. What is the level of measurement of the data?

Select the correct answer below:

○ nominal

◉ <mark>ordinal</mark>

○ interval

○ ratio

29. Edward has created an experiment to test whether or not height has any effect on red blood cell count. Which of the following gives the explanatory and response variables, respectively, in this situation?

Select the correct answer below:

◉ <mark>height and red blood cell count</mark>

○ red blood cell count and height

○ the number of people in the experiment and red blood cell count

○ the number of people in the experiment and height

30. What type of data is collected if Maria is studying eye color?

Select the correct answer below:

◉ <mark>qualitative data</mark>

○ discrete quantitative data

○ continuous quantitative data

○ none of the above