

# R Exams

Statistics Exam 2019-03-14

Exam ID 00001

Name: \_\_\_\_\_

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1. (a) ☒ (b) ☐
2. (a) ☒ (b) ☐
3. (a) ☒ (b) ☐ (c) ☒ (d) ☐
4. (a) ☐ (b) ☒
5. (a) ☐ (b) ☒
6. (a) ☐ (b) ☒
7. (a) ☐ (b) ☒
8. (a) ☐ (b) ☒ (c) ☐
9. (a) ☒ (b) ☐
10. (a) ☐ (b) ☒
11. (a) ☐ (b) ☒
12. (a) ☐ (b) ☒ (c) ☐ (d) ☐ (e) ☐

13. (a) ☐ (b) ☒ (c) ☐ (d) ☐ (e) ☐
14. (a) ☐ (b) ☐ (c) ☐ (d) ☒ (e) ☐
15. (a) ☐ (b) ☐ (c) ☐ (d) ☒ (e) ☐
16. (a) ☐ (b) ☐ (c) ☐ (d) ☐ (e) ☒
17. (a) ☐ (b) ☐ (c) ☒ (d) ☐ (e) ☐
18. (a) ☒ (b) ☐
19. (a) ☐ (b) ☒
20. (a) ☒ (b) ☐ (c) ☐ (d) ☒ (e) ☒ (f) ☐ (g) ☒ (h) ☒  
 (i) ☒

1. **Problem**

Part of understanding statistics is understanding what results mean in real life.

- (a) True
- (b) False

**Solution**

- (a) True.
- (b) False.

2. **Problem**

The purpose of statistics is to make things more complicated.

- (a) False
- (b) True

**Solution**

- (a) True.
- (b) False.

3. **Problem**

What is a data frame in R?

- (a) It is a convenient way to group study data used for an analysis.
- (b) It is used for displaying graphical data.
- (c) It is a structure for storing data sets.
- (d) There is not such thing in R.

**Solution**

- (a) True.
- (b) False.
- (c) True.
- (d) False.

4. **Problem**

$x=2$  and  $x<-2$  mean the same thing in R.

- (a) False
- (b) True

**Solution**

- (a) False.
- (b) True.

5. **Problem**

Rstudio needs R to run.

- (a) False

- (b) True

**Solution**

- (a) False.
- (b) True.

**6. Problem**

A variable we think is a CAUSE is called an INDEPENDENT variable or IV for short.

- (a) False
- (b) True

**Solution**

- (a) False.
- (b) True.

**7. Problem**

Another name for a dependent variable (DV) is an outcome variable.

- (a) False
- (b) True

**Solution**

- (a) False.
- (b) True.

**8. Problem**

In a study examining how quickly and accurately nurses chart on an EMR page when different layouts are used, nurses are divided into three groups. One group charts on the regular EMR page. One group charts on modified layout #1. And one group charts on modified layout #2. After all nurses have completed their charting, the time to complete charting and the number of mistakes are measured. What type of variable is number of mistakes?

- (a) independent variable
- (b) dependent variable
- (c) not enough information

**Solution**

- (a) False.
- (b) True.
- (c) False.

**9. Problem**

Randomization is one way we try to reduce unsystematic variation.

- (a) True
- (b) False

**Solution**

- (a) True.
- (b) False.

**10. Problem**

Longitudinal research measures at multiple points in time.

- (a) False
- (b) True

**Solution**

- (a) False.
- (b) True.

**11. Problem**

Validity means we measure what we intend to measure.

- (a) False
- (b) True

**Solution**

- (a) False.
- (b) True.

**12. Problem**

What is the level of measurement for a variable called age?

- (a) ratio
- (b) not enough information
- (c) interval
- (d) ordinal
- (e) nominal

**Solution**

- (a) False.
- (b) True.
- (c) False.
- (d) False.
- (e) False.

**13. Problem**

What level of measurement is a variable called parts per million where measurements look like 10, 15, 18, 20, etc.?

- (a) ordinal
- (b) ratio

- (c) nominal
- (d) not enough information
- (e) interval

**Solution**

- (a) False.
- (b) True.
- (c) False.
- (d) False.
- (e) False.

**14. Problem**

What level of measurement is a variable called race results where measurements look like first, second, third, etc.?

- (a) nominal
- (b) not enough information
- (c) ratio
- (d) ordinal
- (e) interval

**Solution**

- (a) False.
- (b) False.
- (c) False.
- (d) True.
- (e) False.

**15. Problem**

What level of measurement is a variable called temperature in Celsius where measurements look like 36, 36.5, 37, 38. etc.?

- (a) not enough information
- (b) ratio
- (c) ordinal
- (d) interval
- (e) nominal

**Solution**

- (a) False.
- (b) False.
- (c) False.
- (d) True.
- (e) False.

16. **Problem**

What level of measurement is a variable called year in school where measurements look like freshman, sophomore, junior, senior?

- (a) interval
- (b) nominal
- (c) ratio
- (d) not enough information
- (e) ordinal

**Solution**

- (a) False.
- (b) False.
- (c) False.
- (d) False.
- (e) True.

17. **Problem**

What level of measurement is a variable called weight in pounds where measurements look like 125, 135, 150, 195, 210, etc.?

- (a) nominal
- (b) interval
- (c) ratio
- (d) ordinal
- (e) not enough information

**Solution**

- (a) False.
- (b) False.
- (c) True.
- (d) False.
- (e) False.

18. **Problem**

Categorical variables are made up of categories.

- (a) True
- (b) False

**Solution**

- (a) True.
- (b) False.

19. **Problem**

Interval variables have a numerically meaningful zero point.

- (a) True
- (b) False

**Solution**

- (a) False.
- (b) True.

**20. Problem**

What is true of interval level data?

- (a) Zero is arbitrary.
- (b) It is a categorical variable.
- (c) It is the next to lowest level of measurement.
- (d) Addition and subtraction may be performed.
- (e) The appropriate descriptive statistics are mean and standard deviation.
- (f) The distance between measurement points is unknown and inconsistent.
- (g) The mean, median, and mode are meaningful measures of central tendency.
- (h) Multiplication and division are not really appropriate.
- (i) Usually psychometric measurements.

**Solution**

- (a) True.
- (b) False.
- (c) False.
- (d) True.
- (e) True.
- (f) False.
- (g) True.
- (h) True.
- (i) True.