R University

Statistics Exam 2015-01-01 **Exam ID 00001**

Name: _____

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Signature: _____

1. (a) [X] (b) [ ] (c) [ ] (d) [ ]
2. **nominal**
3. (a) [X] (b) [ ] (c) [ ] (d) [ ] (e) [ ] (f) [ ] (g) [ ] (h) [ ]
4. **nominal**
5. (a) [ ] (b) [ ] (c) [ ] (d) [ ] (e) [ ] (f) [X] (g) [ ] (h) [X]
6. **interval**
7. (a) [X] (b) [ ] (c) [X] (d) [ ] (e) [ ] (f) [X] (g) [ ] (h) [X]
8. **ratio**
9. (a) [ ] (b) [ ] (c) [ ] (d) [ ] (e) [X] (f) [X] (g) [ ] (h) [ ]

1. **Problem**
   What is the level of measurement for a variable called eye_color with observations like blue, green, brown, ... ?

   (a) nominal
   (b) ordinal
   (c) interval
   (d) ratio

   Solution

   (a) True. nominal
   (b) False. ordinal
   (c) False. interval
   (d) False. ratio

2. **Problem**
   What is the level of measurement for variable = sex with responses = (male, female, other)?

   Solution
   The level of measurement for variable = sex with responses = (male, female, other) is nominal.

3. **Problem**
   Which of the following statements about nominal level of measurement is correct?

   (a) It is categorical.
   (b) The measurement has a meaningful zero.
   (c) This level of measurement is often used for summary scores on psychometric instruments.
   (d) Meaningful ratios can be created with this level of measurement.
   (e) This level of measurement is often used for numerical measurements of tangible phenomena (e.g. time, height, weight, etc.)
   (f) It is continuous.
   (g) There is order to the catgories.
   (h) It is the next to lowest level of measurement.

   Solution

   (a) True. It is categorical.
   (b) False. The measurement has a meaningful zero.
   (c) False. This level of measurement is often used for summary scores on psychometric instruments.
   (d) False. Meaningful ratios can be created with this level of measurement.
   (e) False. This level of measurement is often used for numerical measurements of tangible phenomena (e.g. time, height, weight, etc.)
   (f) False. It is continuous.
   (g) False. There is order to the catgories.
   (h) False. It is the next to lowest level of measurement.

4. **Problem**
   What is the level of measurement for variable = favorite color with responses = (red, orange, yello, green, blue, violet)?

   Solution
   The level of measurement for variable = favorite color with responses = (red, orange, yello, green, blue, violet) is nominal.

5. **Problem**
   Which of the following statements about interval level of measurement is correct?

   (a) It is the lowest level of measurement.
   (b) The distance between the units of measurement is unknown.
   (c) This level of measurement is often used for individual questions on psychometric instruments (e.g. Likert-type scales).
   (d) It is categorical.
   (e) The measurement has a meaningful zero.
   (f) This level of measurement is often used for summary scores on psychometric instruments.
   (g) It is the next to lowest level of measurement.
   (h) It is continuous.

   Solution

   (a) False. It is the lowest level of measurement.
   (b) False. The distance between the units of measurement is unknown.
   (c) False. This level of measurement is often used for individual questions on psychometric instruments (e.g. Likert-type scales).
   (d) False. It is categorical.
   (e) False. The measurement has a meaningful zero.
   (f) True. This level of measurement is often used for summary scores on psychometric instruments.
   (g) False. It is the next to lowest level of measurement.
   (h) True. It is continuous.

6. **Problem**
   What is the level of measurement for variable = temperature in Fahrenheit with responses = numerical responses with 1 decimal place (e.g. 37.1, 38.0, etc.)?

   Solution
   The level of measurement for variable = temperature in Fahrenheit with responses = numerical responses with 1 decimal place (e.g. 37.1, 38.0, etc.) is interval.

7. **Problem**
   Which of the following statements about ratio level of measurement is correct?

   (a) It is continuous.
   (b) This level of measurement is often used for individual questions on psychometric instruments (e.g. Likert-type scales).
   (c) The measurement has a meaningful zero.
   (d) It is the lowest level of measurement.

(e) The distance between the units of measurement is unknown.

(f) Meaningful ratios can be created with this level of measurement.

(g) If the categories are numbered, the numbers have no meaning.

(h) This level of measurement is often used for numerical measurements of tangible phenomena (e.g. time, height, weight, etc.)

Solution

(a) True. It is continuous.

(b) False. This level of measurement is often used for individual questions on psychometric instruments (e.g. Likert-type scales).

(c) True. The measurement has a meaningful zero.

(d) False. It is the lowest level of measurement.

(e) False. The distance between the units of measurement is unknown.

(f) True. Meaningful ratios can be created with this level of measurement.

(g) False. If the categories are numbered, the numbers have no meaning.

(h) True. This level of measurement is often used for numerical measurements of tangible phenomena (e.g. time, height, weight, etc.)

8. **Problem**
What is the level of measurement for variable = time in seconds with responses = numerical responses (e.g. 60, 72, 65, etc.)?

Solution
The level of measurement for variable = time in seconds with responses = numerical responses (e.g. 60, 72, 65, etc.) is ratio.

9. **Problem**
Which of the following statements about ordinal level of measurement is correct?

(a) This level of measurement is often used for summary scores of psychometric constructs.

(b) This level of measurement is often used for summary scores on psychometric instruments.

(c) The measurement has a meaningful zero.

(d) It is the next to highest level of measurement.

(e) This level of measurement divides observations into groups.

(f) This level of measurement is often used for individual questions on psychometric instruments (e.g. Likert-type scales).

(g) This level of measurement is often used for numerical measurements of tangible phenomena (e.g. time, height, weight, etc.)

(h) If the categories are numbered, the numbers have no meaning.

Solution

(a) False. This level of measurement is often used for summary scores of psychometric constructs.

(b) False. This level of measurement is often used for summary scores on psychometric instruments.

(c) False. The measurement has a meaningful zero.

(d) False. It is the next to highest level of measurement.

(e) True. This level of measurement divides observations into groups.

(f) True. This level of measurement is often used for individual questions on psychometric instruments (e.g. Likert-type scales).

(g) False. This level of measurement is often used for numerical measurements of tangible phenomena (e.g. time, height, weight, etc.)

(h) False. If the categories are numbered, the numbers have no meaning.