

You have 60 minutes to complete this exam. Besides this paper and a pen, no other aid or tool is needed/allowed. Your answers should be short, concise and of course about the question. If you need extra paper (you can write on separate paper) or have any other question, just raise your hands!

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

1. Explain the followings:

(a) validity (1 point)

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\_\_\_\_\_  
\_\_\_\_\_

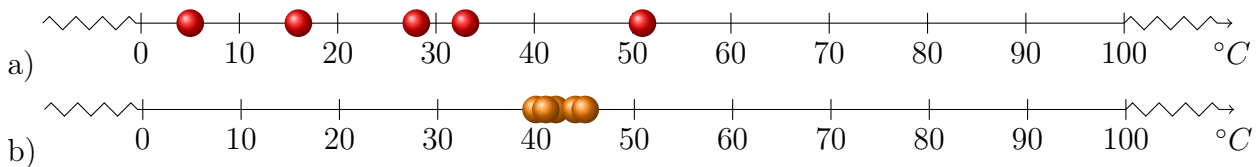
(b) reliability (1 point)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(c) sampling frame (1 point)

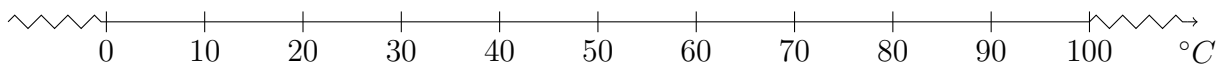
\_\_\_\_\_  
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2. How would you describe the below measurements (temperature of  $60^{\circ}C$ )? Explain! (2 points)



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\_\_\_\_\_

3. Plot a reliable but not valid sample of measurements made in water kept at  $60^{\circ}C$ ! (1 point)



4. We asked students about their bodyweight, and got these values: 30, 90, 90, 60, 30. (1 point)  
What do you think of the reliability of the chosen sample? Why?

\_\_\_\_\_  
\_\_\_\_\_  
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5. What entities are described and compared by the following research topics? Who are the respondents?

(a) "The longer the engagement period, the longer the marriage."

(1 point)

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(b) Does economic development lower the birth rate?

(1 point)

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6. Comment on the methodological problems of Durkheim's study about suicides in Germany!

(2 points)

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7. Describe the types of variables and the levels of measurement!

(4 points)

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8. Define the level of measurement:

(a) Educational level (1/2 point)

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(b) Place of birth (1/2 point)

\_\_\_\_\_

(c) Bodyweight (1/2 point)

\_\_\_\_\_

(d) Favorite color (1/2 point)

\_\_\_\_\_

(e) Age (computed from date of birth) (1/2 point)

\_\_\_\_\_

(f) Name (1/2 point)

\_\_\_\_\_

9. Describe the questions, problems and the process of conceptualization in practice by showing a *short* introduction about a fictitious research subject! (2 points)

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10. What indicators would you set up in your chosen research subject? (1 point)

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11. Make an example of the following response formats:

(a) Likert scale:

(1 point)

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(b) Numerical rating scales:

(1 point)

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(c) Dichotome variable:

(1 point)

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12. Explain the difference between the quota and stratified sampling!

(2 points)

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13. Compute (without calculator!) the mean, median, mode, standard deviation and standard error of values found in question 4! How would you define the confidence interval?

(4 points)

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$$\bar{x} = \frac{\sum_{i=1}^n x_i}{n} \quad \sigma = \sqrt{\sum_{i=1}^n \frac{(x_i - \bar{x})^2}{n}} \quad SE = \frac{\sigma}{\sqrt{n}} \sqrt{1 - \frac{n}{N}}$$