

Who Wants To Be A Millionaire?



Research Methods Edition

Revision Topics

- Types of design
- Statistical tests
 - T-test
 - Correlation
- One- and two-tailed hypotheses
- Categorical and continuous data
- Descriptive statistics
- Types of variables

Round One!

Question 1

1. The variable that is manipulated by a researcher during a study is the:

- A Independent variable
- B Extraneous variable
- C Dependent variable
- D None of the above

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- A Independent variable
- B Extraneous variable
- C Dependent variable
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Question 2

2. How many levels of an IV should there be in an experiment?

- A One
- B At least 2
- C More than 2
- D More than 5

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- A One
- B At least 2
- C More than 2
- D More than 5

Question 3

3. Room temperature, lighting, age/gender of the researcher, the weather during the experiment, etc. are all examples of:

- A Independent variables
- B Dependent variables
- C Extraneous variables
- D None of the above

3. Room temperature, lighting, age/gender of the researcher, the weather during the experiment, etc. are all examples of:

- A Independent variables
- B Dependent variables
- C Extraneous variables
- D None of the above

Question 4

4. A group of researchers are looking to determine the difference in narcissism scores between males and females. The IV in this experiment is:

- A Narcissism scores
- B There is no IV
- C The number of participants
- D Gender

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- B There is no IV
- C The number of participants
- D Gender

Question 5

5. A group of researchers are looking to determine the difference in narcissism scores between males and females. The DV in this experiment is:

A Narcissism scores

B There is no DV

C The number of participants

D Gender

5. A group of researchers are looking to determine the difference in narcissism scores between males and females. The DV in this experiment is:

A Narcissism scores

B There is no DV

C The number of participants

D Gender

Question 6

6. An experiment involving two groups of participants who are each exposed to one level of the IV is an example of:

A Between-subjects design

B Within-subjects design

C Quasi-experimental design

D None of the above

6. An experiment involving two groups of participants who are each exposed to one level of the IV is an example of:

- A Between-subjects design
- B Within-subjects design
- C Quasi-experimental design
- D None of the above

Question 7

7. A disadvantage of a between-subjects design is:

- A Pre-existing individual differences in participants
- B Requires a larger amount of participants
- C Fatigue effects
- D Both A and B

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- B Requires a larger amount of participants
- C Fatigue effects
- D Both A and B

Question 8

8. Within-subjects designs involve ____ group(s) of participants being exposed to ____ levels of the IV.

A 2 1

B 2 all

C 1 all

D 1 1

8. Within-subjects designs involve ____ group(s) of participants being exposed to ____ levels of the IV.

A 2 1

B 2 all

C 1 all

D 1 1

Question 9

9. One advantage of a within-subjects design is:

- A Easier to run an experiment with one group of people
- B Eliminates individual differences
- C Minimises harm
- D None of the above

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- A Easier to run an experiment with one group of people
- B Eliminates individual differences
- C Minimises harm
- D None of the above

Question 10

10. You are interested in looking at the relationship between driving ability and number of crashes. What is the design of this study?

- A Correlational
- B Between-subjects
- C Within-subjects
- D Qualitative

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Round Two!

Question 1

Using the data table on the board, answer the following questions.

1. How do we calculate a mean score?

- A Take the most commonly occurring number
- B Rank the numbers and take the middle number
- C Add all the values and divide by the number of data points
- D Add all the values and divide by 10

1. How do we calculate a mean score?

- A Take the most commonly occurring number
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- C Add all the values and divide by the number of data points
- D Add all the values and divide by 10

Question 2

2. What is the mean score for this set of data?

A 10

B 11

C 9.75

D 8.5

2. What is the mean score for this set of data?

A 10

B 11

C 9.75

D 8.5

Question 3

3. How do we calculate a median score?

- A Take the most commonly occurring number
- B Rank the numbers and take the middle number
- C Add all the values and divide by the number of data points
- D Add all the values and divide by 10

3. How do we calculate a median score?

- A Take the most commonly occurring number
- B Rank the numbers and take the middle number
- C Add all the values and divide by the number of data points
- D Add all the values and divide by 10

Question 4

4. What is the median for the set of data?

- A 10
- B 11
- C 9.75
- D 8.5

4. What is the median for the set of data?

A 10

B 11

C 9.75

D 8.5

Question 5

5. How do we calculate a mode score?

A Take the most commonly occurring number

B Rank the numbers and take the middle number

C Add all the values and divide by the number of data points

D Add all the values and divide by 10

5. How do we calculate a mode score?

A Take the most commonly occurring number

B Rank the numbers and take the middle number

C Add all the values and divide by the number of data points

D Add all the values and divide by 10

Question 6

4. What is the mode for the set of data?

A 10

B 11

C 9.75

D 8.5

4. What is the mode for the set of data?

A 10

B 11

C 9.75

D 8.5

Bonus question – which would be best for this data set?

Question 7

7. What is the range for this set of data?

A 4

B 6

C 9

D 3

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A 4

B 6

C 9

D 3

Question 8

8. The range, median, mode and mean are all examples of:

- A Prescriptive statistics
- B Descriptive statistics
- C Reliable statistics
- D Inferential statistics

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Round Three!

What levels of measurement would be best for the following types of data/variables?

Question 1

1. Age

- A Continuous only
- B Categorical only
- C Either continuous or categorical
- D None of the above

1. Age

- A Continuous only
- B Categorical only
- C Either continuous or categorical
- D None of the above

Question 2

2. If age was measured as a categorical variable, what level of measurement would this be?

- A Nominal
- B Ordinal
- C Interval
- D Ratio

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- B Ordinal
- C Interval
- D Ratio

Bonus question –
WHY?

Question 3

3. Gender

- A Categorical - ordinal
- B Categorical – nominal
- C Continuous
- D None of the above

3. Gender

- A Categorical - ordinal
- B Categorical – nominal
- C Continuous
- D None of the above

Bonus question –
WHY?

Question 4

4. Personality traits (e.g.,
extraversion)

- A Continuous extraversion score
- B Categorical – high and low
- C Dependent on design and proposed analysis
- D None of the above

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Question 5

5. Scoring on a Likert scale for a questionnaire.

- A Ratio
- B Ordinal
- C Interval
- D Nominal

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- A Ratio
- B Ordinal
- C Interval
- D Nominal

Bonus question –
WHY?

Question 6

6. Which of the following is *not* a quantitative scale of measurement?

A Ratio

B Ordinal

C Interval

D Internal

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A Ratio

B Ordinal

C Interval

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Question 7

7. Temperature (Celsius) would be considered a ____ measurement scale

A Ratio

B Ordinal

C Interval

D Internal

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Round Four!

Question 1

1. If you are using a between-subjects design, what statistical test would you use to analyse your data?

- A Descriptive statistics
- B Correlation
- C Paired-samples t-test
- D Independent samples t-test

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- D Independent samples t-test

Question 2

2. If you are using a within-subjects design, what statistical test would you use to analyse your data?

- A Descriptive statistics
- B Correlation
- C Paired-samples t-test
- D Independent samples t-test

2. If you are using a within-subjects design, what statistical test would you use to analyse your data?

- A Descriptive statistics
- B Correlation
- C Paired-samples t-test
- D Independent samples t-test

Question 3

3. If you are looking to assess whether there is a relationship between two variables, which statistical test would you use?

A Descriptive statistics

B Correlation

C Paired-samples t-test

D Independent samples t-test

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B Correlation

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Question 4

4. What p-value is the standard value used in deciding whether to reject the null hypothesis?

A .01

B .10

C .05

D .50

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A .01

B .10

C .05

D .50

Question 5

5. The two things that a correlation score/value assesses is:

A Direction and reliability

B Strength and direction

C Reliability and strength

D Validity and direction

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A Direction and reliability

B Strength and direction

C Reliability and strength

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Question 6

6. Which of the following correlation values is the strongest?

A $r = 0.08$

B $r = -0.04$

C $r = -0.90$

D $r = 0.60$

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Question 7

7. You obtain the following results from a correlation analysis:

$$r = .12, p = .057$$

The study, therefore, found:

- A A significant negative relationship between the two variables
- B No significant relationship between the two variables
- C A significant positive relationship between the two variables
- D A relationship between taking part in the study and the result of variable X

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Question 8

8. A correlation score of 0.80 means:

- A As the variable X increases, the variable Y decreases
- B As the variable X increases, the variable Y increases
- C As the variable X increases, the variable Y remains constant
- D The variable Y is better than the variable X

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Question 9

9. Generally, a correlation is considered to be 'weak' if the r falls between:

- A 0.70 and 1.00
- B -1.00 and 0
- C 0 and 0.30
- D 0.30 and 0.60

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Question 10

10. One of the biggest problems of a high correlation is:

- A It is inaccurate
- B It does not imply causation
- C It is rarely useful in the real world
- D High correlation and low correlation are fairly similar

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Round Five!

Using the scenario on the board, answer the following questions:

Question 1

1. The design of the study was:

A Within-subjects

B Correlation

C Between-subjects

D A sign-test

1. The design of the study was:

A Within-subjects

B Correlation

C Between-subjects

D A sign-test

Question 2

2. The dependent variable was:

A The number of phobias presented

B The gender of the participants

C The questionnaire

D The number of phobias participants reported having

2. The dependent variable was:

- A The number of phobias presented
- B The gender of the participants
- C The questionnaire
- D The reported number of phobias that participants had

Question 3

3. The hypothesis of this study was:

- A Two tailed because a significant difference was predicted
- B One tailed because a significant difference was predicted
- C One tailed because researchers predicted that women would have more phobias than men
- D Two tailed because researchers predicted that women would have more phobias than men

3. The hypothesis of this study was:

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- B One tailed because a significant difference was predicted
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Thank you for playing

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