



DISCOVERING PSYCHOLOGY

UNDERSTANDING RESEARCH

Directions: This study guide must be completed during today's film. You are to answer the following questions. The concepts are presented chronologically during the film.

1. What do psychologists use to assist them in doing research?
2. What types of methods do they use to explore our personalities, values and talents?
3. What is a hypothesis?
4. What is the experimental group?
5. What is the control group?
6. What notion about the way we believe is psychology designed to assist us with?
7. Can psychological reality affect biological reality?
8. What is the placebo effect?
9. What is the double blind method?
10. What is the significance of Norman Cousins?
11. What were the other extraneous variables or influences on his state of mind and health?
12. What is the difference between correlation and causation?
13. Why is sampling so important in psychology?
14. What does representative mean?
15. What is pseudo science?

Research in Psychology  
An Overview of the Research Methodology Used in Psychology

What are the concepts that you need to know about the methodology used in psychology?

You should be able to list the steps in the process of conducting a research project.

*Essential Details*

A research project begins with the asking of a question related to some area of behavior.

A hypothesis is an educated guess about the question. The accuracy of a hypothesis can be tested.

Using a variety of methods, the researcher tests the hypothesis to determine an answer to the question.

After the hypothesis is tested the researcher analyzes or interprets the meaning of the data found.

Conclusions are drawn from the analysis of tested data and a new hypothesis is formed.

A determination is made as to whether the research should be replicated or not.

A theory forms when explanations about a topic are generally accepted as solutions to the question.

Theories are tentative explanations however and must be evaluated themselves.

You should be able explain the methods used to gather data related to the psychological inquiry.

*Essential Details*

Descriptive studies include Case studies, Observations, Surveys, and tests.

Observations are either naturalistic or laboratory and do not involve manipulating variables.

Surveys involve the use of interviews or questionnaires to gather research data.

Good tests and surveys... in fact any research should have a high degrees of validity and reliability.

Correlational studies try to show the relationship between variables but not their causation.

Experiments involve the control of an independent variable which in turn influences a dependent one.

The experimental group receives the independent variable. The control group does not.

Statistics either describe data, or infer the meaning of relationships between variables.

You should be able to identify key issues in the debate over ethics in psychological research.

*Essential Details*

Each research study must weigh the cost of deception of the subject against the need to learn.

The research must avoid any physical or psychological harm any subject.

Deception must be kept to a minimum and must be explained at the end of the research project.

If the research is published great care must be given to protect the subject confidentiality.

The issue of animal usage in research has been a hot topic of debate and continues to be.

The forbidden experiment refers to the use of a human as a full time subject... slave.

The bottom line for ethical consideration is whether you would give the condition to a child...

Many studies over the years could not be done today as a result of new ethical interpretations.

Psychology is a science in that it uses the scientific method.

Unit 02: Research Methodology in Psychology

Directions: Each week in Advanced Placement Psychology, there will be three quizzes. Each quiz is worth 10 test points. This sheet will be turned in at the end of the week.

Quiz 01 (02 Points Each)

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_

Total Points \_\_\_\_\_

Quiz 02 (02 Points Each)

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_

Total Points \_\_\_\_\_

Quiz 03 (02 Points Each)

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_

Total Points \_\_\_\_\_

Grand Total \_\_\_\_\_

Research Methodology in Psychology

Directions: Answer each of the following questions. Explain the significance of each answer.

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What is applied research?  
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What is the baseline?  
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What is a biased sample?  
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What is a case study?  
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What does causation mean?  
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What is a correlational coefficient?  
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What is cognitive behaviorism?  
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What is cognitive psychology?  
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What is a conditional statement?  
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What is the control in an experiment?  
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What is the control group?  
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What does correlation mean?  
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What is a correlational study?  
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What is courtesy bias?  
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What is a cross sectional study?  
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What is a dependent variable?  
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What is descriptive statistics?  
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What is a double-blind experiment?  
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What is empirical evidence?  
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What is an ethologist?  
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What is an experiment?  
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What is the experimental group?  
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What is experimental self-observation?  
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who are the experimental subjects?  
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What is experimenter effect?  
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What are extraneous variables?  
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What is the fallacy of positive instances?

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What is a false positive?

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What is a field experiment?

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What does free will mean?

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What is a frequency distribution?

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What is a hypothesis?

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What is the independent variable?

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What is inferential statistics?

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What is a linear relationship?

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What is a longitudinal study?

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What is the mean?

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What are measures of central tendency?

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What is the median?

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What is meta-analysis?

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What is the mode?

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What is the scientific model?

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What is a natural clinical test?

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What is the natural setting?

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What is naturalistic observation?

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What is a lab observation?

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What is negative correlation?

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What is a negative relationship?

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What is a norm as it applies to research?

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What is the normal curve?

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What is an observation?

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What is observer bias?

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What is the observer effect?

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What is an open-ended interview?

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What is an operational definition?

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What does placebo mean?

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What is the placebo effect?

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What is a population?

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What is a positive correlation?

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What is a positive relationship?

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What is random assignment?

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What does representative mean?

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What is the range?

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What does replicate mean?

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What is a representative sample?

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What is a research method?

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What is a response in psychology?

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What is a sample?

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What does self-fulfilling prophecy mean?

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What is a single-blind experiment?

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What does Sixty-Eight Percent have to do with the population?

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What is standard deviation?

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What is a stratified sample?

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What does it mean to be statistically significant?

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What is a stimulus?

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What is a survey method?

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What is a variable?

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What is a variance?

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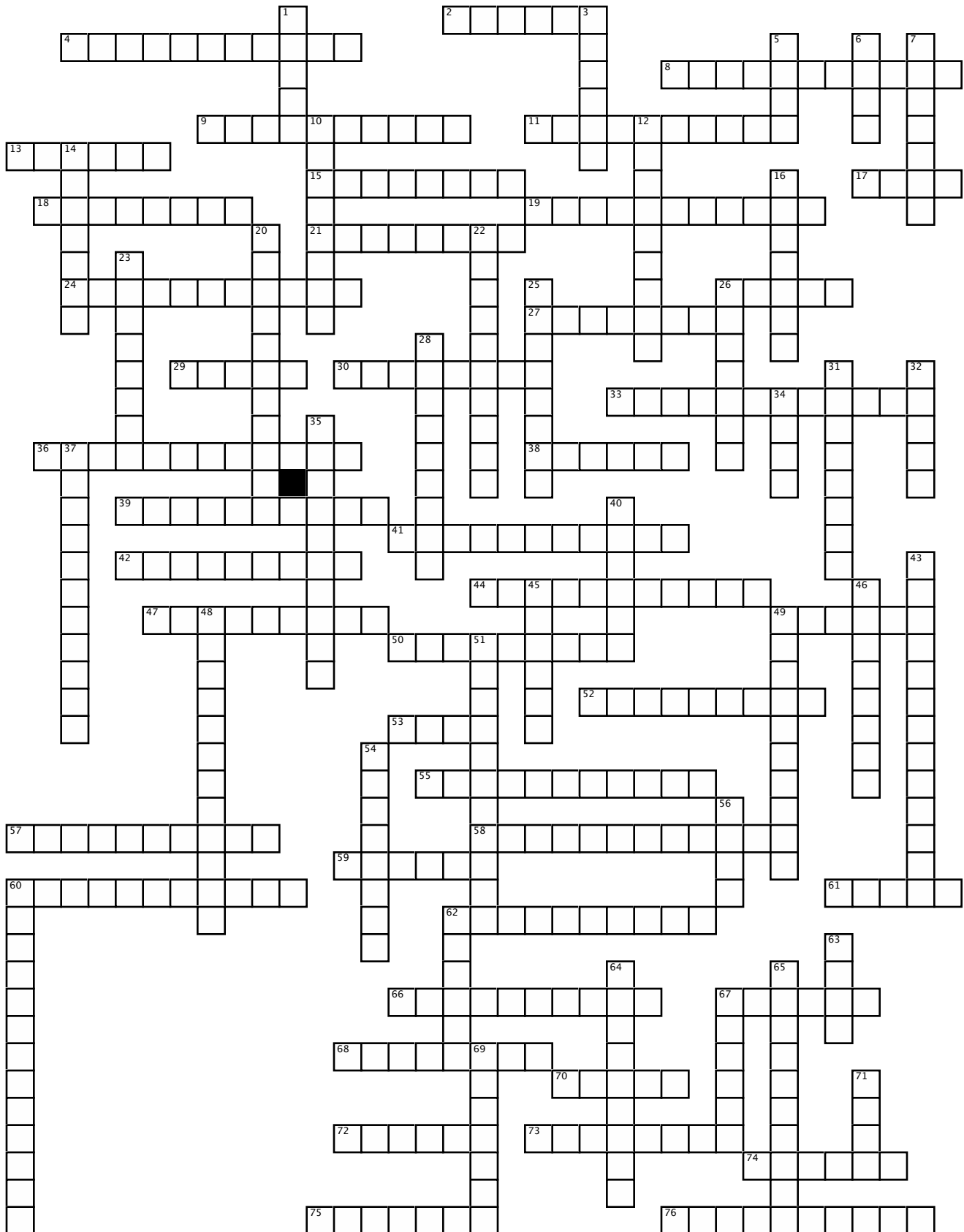
What is volunteer bias?

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What is a waiting-list control group?

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Unit Review Number 02  
Research Methodology in Psychology



## Across

2. In a \_\_\_\_\_ distribution, 68 percent of the scores will fall between the first standard deviation lines to the left and right of the mean.
4. Experimental results that would rarely occur by chance alone are called statistically \_\_\_\_\_ results.
8. A \_\_\_\_\_ statement is one that contains a qualification, often of the if-then form.
9. A double blind \_\_\_\_\_ is a method in which neither subjects nor experimenters know which subjects are in the experimental group.
11. Inferential \_\_\_\_\_ is the branch of mathematics that The branch of math that focuses on describing in numerical format what might be happening or what might happen in the future.
13. To replicate means to reproduce or \_\_\_\_\_.
15. A \_\_\_\_\_ is any physical energy sensed by an organism.
17. Observer \_\_\_\_\_ is the tendency of an observer to distort observations or perceptions to match his or her expectations.
18. A \_\_\_\_\_ is any condition that changes or can be made to change; a measure, event, or state that may vary.
19. Directly gathering data by recording facts or events is called \_\_\_\_\_.
21. Changes in a person's behavior brought about by an awareness of being observed is called the \_\_\_\_\_ effect.
24. Cognitive \_\_\_\_\_ is the approach that combines behavioral principles with cognition (perception, thinking, anticipation) to explain behavior.
26. The normal \_\_\_\_\_ is shaped in a bell shape.
27. Empirical \_\_\_\_\_ are facts or information gained by direct observation or experience.
29. An experiment conducted in a natural setting is called a \_\_\_\_\_ experiment.
30. The \_\_\_\_\_ in a research study is the record of the initial frequency of a target behavior.
33. Any changes in subjects' behavior caused by the unintended influence of an experimenter's actions are called \_\_\_\_\_ effect.
36. A \_\_\_\_\_ study is one that follows a group of subjects over a very long range of time.
38. Random assignment is the method of placing subjects into either the experimental or control group at \_\_\_\_\_.
39. In an experiment, any condition prevented from influencing the outcome are \_\_\_\_\_ variables.
41. In a controlled experiment, the group of subjects exposed to the \_\_\_\_\_ variable or experimental manipulation is called the experimental group.

## Down

1. The \_\_\_\_\_ is the difference between the highest score and the lowest score in a distribution.
3. A \_\_\_\_\_ relationship is one that forms a straight line when graphed.
5. Courtesy \_\_\_\_\_ is the tendency to give "polite" answers to avoid hurting an interviewer's feelings.
6. An average score for a designated group of people is called the \_\_\_\_\_.
7. An accident or other natural event that provides psychological data is called a \_\_\_\_\_ clinical test.
10. A \_\_\_\_\_ is any muscular action, glandular activity, or other identifiable behavior.
12. A negative relationship is one in which \_\_\_\_\_ in one measure correspond to decreases in the other.
14. A substance that resembles a drug but has no chemical effect is called a \_\_\_\_\_.
16. A waiting list \_\_\_\_\_ group is a group of people who receive no treatment in experiments designed to test the effectiveness of psychotherapy.
20. An orderly relationship between two events, measures, or variables is called a \_\_\_\_\_.
22. Control, in an \_\_\_\_\_ is the process of eliminating, identifying, or equalizing all factors in an experiment that could affect the outcome.
23. Cognitive psychology is the study of human \_\_\_\_\_, knowing, understanding, and information processing.
25. Applied \_\_\_\_\_ involves scientific study undertaken to solve immediate practical problems.
26. Measures of \_\_\_\_\_ tendency are those scores that give an indication of the centrality and shape of the distribution.
28. In an experiment, the condition (usually a behavior) that reflects the effects of the independent variable is called the \_\_\_\_\_ variable.
31. Meta \_\_\_\_\_ is a statistical technique for combining the results of many studies on the same subject.
32. Aristotle is the \_\_\_\_\_ philosopher who used logic to examine the human condition.
34. The arithmetic \_\_\_\_\_ is the average of all of the scores in a distribution.
35. Observation and recording of naturally occurring behavior that is not manipulated experimentally is called \_\_\_\_\_ observation.
37. Naturalistic \_\_\_\_\_ is the method of studying the subject in it natural setting.
40. The \_\_\_\_\_ is is the absolute middle score in the distribution.
43. Wilhelm Wundt's technique of combining trained \_\_\_\_\_ with objective measurement.

## Across

42. A cross \_\_\_\_\_ study is a study in which several sub groups are investigated at one moment in time.
44. A correlational \_\_\_\_\_ is a statistical index ranging from -1.00 to +1.00 that indicates the direction and degree of correlation.
47. A research method is a systematic approach to answering scientific \_\_\_\_\_.
49. Changes in behavior due to expectations that a drug (or other treatment) will have some effect is called the placebo \_\_\_\_\_.
50. Standard \_\_\_\_\_ is the measure of the average dispersion in a collection of numbers.
52. The fallacy of positive \_\_\_\_\_ is tendency to remember or notice information that fits one's expectations, while forgetting discrepancies.
53. The \_\_\_\_\_ is the most common score in the distribution.
55. An \_\_\_\_\_ definition is a scientific concept by stating the specific actions or procedures used to measure it.
57. Descriptive \_\_\_\_\_ are the tools used to express simple characteristics about a group, sample or population.
58. A frequency \_\_\_\_\_ is a table showing the number of occurrences for each score in a group of scores.
59. Representative means that the \_\_\_\_\_ is like the population.
60. A positive \_\_\_\_\_ is relationship between two variables where one variable increases as the other increases.
61. A double \_\_\_\_\_ experiment is an arrangement in which subjects remain unaware of whether they are in the experimental group or the control group.
62. A \_\_\_\_\_ sample is one that takes into consideration subpopulations in the population.
66. The predicted outcome of an \_\_\_\_\_ or an educated guess about the relationship between variables is called the hypothesis.
67. The use of public polling techniques to answer psychological questions is called the \_\_\_\_\_ method.
68. Humans or animals whose behavior is investigated in an experiment are called \_\_\_\_\_.
70. A false positive, also called a type I \_\_\_\_\_, is a mistake in statistical evaluation in which an error is made rejecting a "correct" null hypothesis.
72. Causation is simply the act of facilitating some \_\_\_\_\_.

## Down

45. A population is the \_\_\_\_\_ group of animals or people belonging to a particular category.
46. A \_\_\_\_\_ correlation is a relationship in which one variable tends to go up as another variable tends to go down.
48. An \_\_\_\_\_ is a person who studies the natural behavior patterns of animals.
49. An \_\_\_\_\_ is a formal trial undertaken to confirm or disconfirm a fact or principle.
51. In an experiment, the condition directly manipulated and changed by the experimenter is called the \_\_\_\_\_ variable.
54. The \_\_\_\_\_ is the difference between the score and the average score.
56. Volunteer \_\_\_\_\_ suggests that those who volunteer for a study are different than the population who do not.
60. A \_\_\_\_\_ study is a non-experimental study designed to measure the degree of relationship (if any) between two or more events, measures, or variables.
62. A small, randomly selected part of a larger population that accurately reflects characteristics of the whole population is a representative \_\_\_\_\_.
63. The doctrine that human beings are capable of freely making choices is simply called \_\_\_\_\_ will.
64. An open ended \_\_\_\_\_ is one in which persons are allowed to freely state their views.
65. A \_\_\_\_\_ that prompts people to act in ways that make the prediction come true is called self fulfilling prophesy.
67. A \_\_\_\_\_ is a subset or portion of a population.
69. In an experiment, the subjects who are exposed to all conditions except the independent variable are called the \_\_\_\_\_ group.
71. A \_\_\_\_\_ study is an intensive investigation of the behavior of a single person.

## Across

73. A \_\_\_\_\_ relationship is one in which increases in one measure correspond to increases in the other.

74. A \_\_\_\_\_ sample is a sample that does not accurately reflect the population from which it was drawn.

75. The environment in which an organism typically lives is called the \_\_\_\_\_ setting.

76. The \_\_\_\_\_ method is a collective group of systematic approaches to discovering scientific truths.