

Unit 1: Scientific Foundations of Psychology

Topic 1.1 – Introducing Psychology

1. Define psychology.

2. Describe how the following individuals contributed to the field of psychology.

Wihelm Wundt	
William James	
G. Stanley Hall	
Mary Whiton Calkins	
Margaret Floy Washburn	
Charles Darwin	
Dorothea Dix	
Sigmund Freud	
Ivan Pavlov	
Jean Piaget	
Carl Rogers	
B.F. Skinner	
John B. Watson	

Topic 1.1- Introducing Psychology (Continued)

3. Describe the different schools of thought in the table below.

Historical Schools Of Thought	
Structuralism	
Functionalism	
Gestalt	
Psychoanalytic/ Psychodynamic	

4. What is the difference between introspection and free association?

5. Describe the different perspectives in the table below.

Modern Perspectives	
Early Behaviorism	
Humanistic	
Sociocultural	
Evolutionary Approach	
Biological Approach	
Cognitive Approach	
Biopsychosocial Approaches	

6. What are the different psychological domains that would be classified as basic research?

7. What are the different psychological domains that would be classified as applied research?

8. Explain the difference between a counselor and a psychiatrist.

Topic 1.1- Introducing Psychology (Continued)

9. Identify the subfields of Psychology in the descriptions below.

Scenario	Subfield	Explanation
When looking to expand your company you seek help to better understanding the specific skills needed for new employees		
When considering how to treat a disorder you determine you should focus on the brain and nervous system		
Conducting research to identify traits that individuals have that shape their identity		
Works with victims of domestic abuse that have been experiencing Post-Traumatic Stress disorder		
Conducts a study that focuses on how people remember dates and key historical events.		
Studies the emotional changes that occur throughout a person's life		
Works with companies to help improve productivity and worker morale at different companies		
Studies the impact of the school bullying on students who are on food stamps		
Studies which workplace environments create the most happy employees		
Works with individuals to provide them with different strategies they can use to help navigate the struggles of the patients daily life.		
Conducting research into different learning styles		
Using an independent variable in a controlled environment to see the impact on the dependent variable.		

Topic 1.2- Research Methods in Psychology

1. Define operational definition.
2. Why is it important to set operational definitions in an experiment?
3. What is the difference between a sample and population?
4. Why do researchers often use samples for their studies instead of the entire population?
5. How is a random sample different from a stratified sample?
6. Explain why many studies will want to have a representative sample.
7. Explain how sampling bias can impact a study.

8. Complete the table below

Research Method	Description	Strengths	Weaknesses
Experiments			
Correlational studies			
Survey research			
Naturalistic Observations			
Case Studies			
Longitudinal Studies			
Cross-Sectional Studies			

Topic 1.3- Defining Psychological Science: The Experimental Method

1. Explain how a hypothesis differs from a theory.
2. Which type of study shows cause and effect?
3. What is the difference between the independent variable (IV) and the dependent variable (DV)
4. Explain the third variable problem and how it could impact an experiment.
5. How do confounding variables impact a controlled experiment?
6. How does random assignment differ from random sample?
7. Why does the placebo effect happen in experiments?
8. What is one way researchers can prevent the placebo effect from occurring in their experiment/study?
9. What is the difference between the control group in a study and the experimental group?
- 10.. Explain how a quasi-experiment differs from an experiment.

Topic 1.4- Selecting a Research Method

1. What is the difference between reliability and validity?
2. What is the difference between a single-blind study and a double blind study?
3. How can conducting a single-blind study or double blind study counter bias in a study?

Topic 1.4- Selecting a Research Method (Continued)

4. Complete the table below.

Type of Bias	Description of Bias	Prevention Measures	Example
Hindsight Bias			
False Consensus Effect			
Confirmation Bias			

5. Complete the table below.

Type of Bias	Description of Bias	Prevention Measures
Experimenter Bias/ Researcher Bias		
Social Desirability Bias/ Participant Bias		
Hawthorne Effect		

Topic 1.5- Statistical Analysis in Psychology

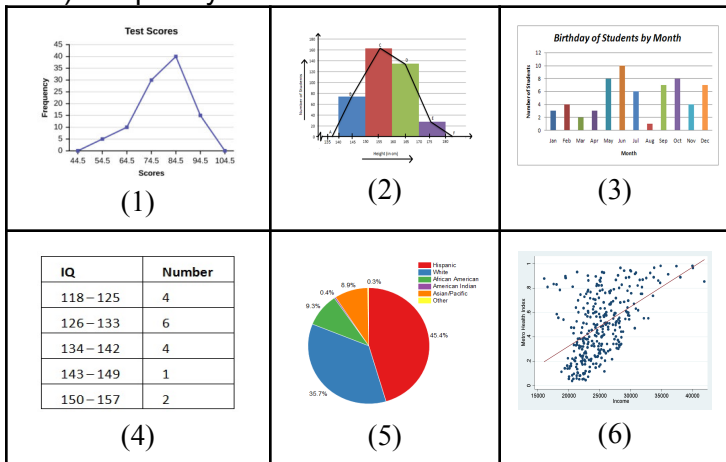
1. What is the difference between qualitative and quantitative data?

2. Explain the purpose of descriptive statistics and inferential statistics.

Topic 1.5- Statistical Analysis in Psychology (Continued)

3. Use the table below to match with the following graphic organizers.

- A) Histogram:
- B) Frequency polygon:
- C) Pie chart:
- D) Scatter plot:
- E) Bar graph:
- F) Frequency distribution table:



4. Explain how you know if an experiment's results are statistically significant.

5. What does a p value of .80 mean?

6. What are the three main measures of central tendency?

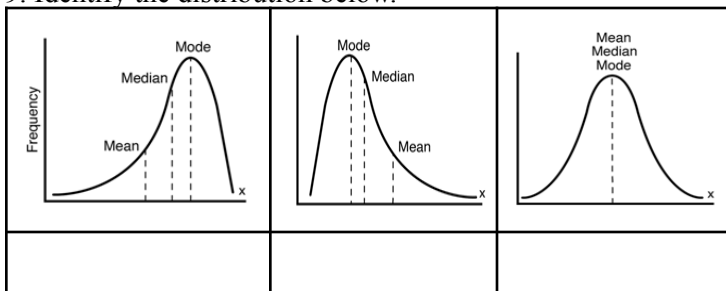
5, 5, 9, 12, 15, 22, 30

7. Use the data set above to answer the following questions.

- A. What is the mode?
- B. What is the mean?
- C. What is the median?
- D. What is the range?

8. What are the two measures of variability?

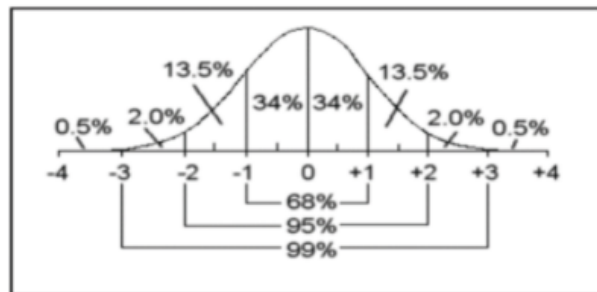
9. Identify the distribution below.



10. What does it mean to have a bimodal skew?

11. Explain what it means to have a positive z score and what it means to have a negative z score in a normal distribution.

12. When talking with your doctor you find out that you are in the 80 percentile for height. Explain what this means.



Use the table above to answer questions 13-16.

13. The mean is 50 and the standard deviation is 15. What percent of the population falls between 80 and 95?

14. The mean is 50 and the standard deviation is 15. What is the percentile rank for 65?

15. The mean is 200 and the standard deviation is 10. What is the percentile rank for 180?

16. The mean is 200 and the standard deviation is 20. What percent of the population falls between 180 and 220?

17. What does it mean if the results of a correlational study are between 0 and 1?

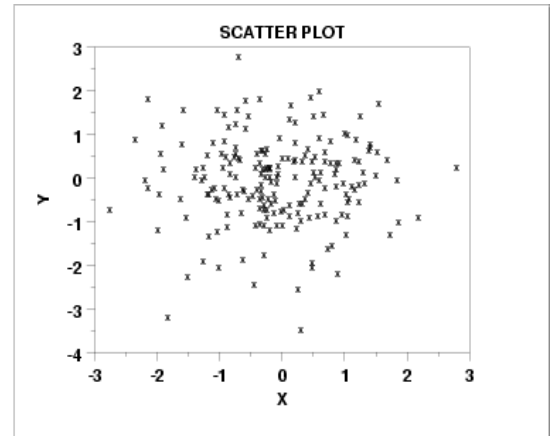
18. What does it mean if the results of a correlational study are between 0 and negative 1?

Topic 1.5- Statistical Analysis in Psychology (Continued)

19. Identify the type of correlation in the graph on the right.

20. What do correlational studies allow researchers to do?

21. True or false. Correlational studies show researchers if there is a cause and effect between an independent variable and dependent variable. Explain your answer.



Topic 1.6- Ethical Guidelines in Psychology

1. What is the role of the American Psychological Association with ethical guidelines in psychology?

2. How does the Institutional Review Board make psychology research safer in colleges and universities around the United States?

3. Explain what informed consent is.

4. What are three things an experiment can have to make sure participants are protected?

5. Identify two ways in which the Stanford Prison experiment failed to protect the participants in the study.

6. Identify two changes that could have been made to the Stanford Prison experiment that would have protected participants in the study.

7. What is the role of the IACUC?