

Chapter 2--The Study of Learning and Behavior

Student: _____

1. The school of thought that rejects scientific method and claims that science is just a debate about an unknowable reality is called ____.

- A. Intellectualism
- B. Realism
- C. Sufism
- D. Constructivism

2. The person who suggested that to learn how nature works, we must "sit down before fact as a little child," and "be prepared to give up every preconceived notion" was ____.

- A. T. H. Huxley
- B. E. L. Thorndike
- C. Charles Darwin
- D. John B. Watson

3. Harry teaches an advanced painting class. His goal is to teach students to paint more creatively. Harry will probably measure learning as a change in response ____.

- A. topography
- B. intensity
- C. speed
- D. rate

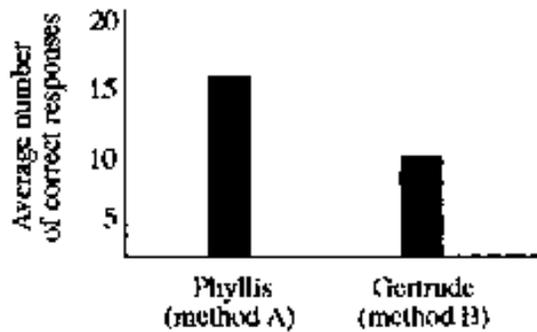
4. Marjorie drives a school bus. Sometimes the kids get rather noisy. She decides to play music the kids like through speakers on the bus, but whenever the kids get too noisy she turns the music off. When they quiet down, she turns the music back on. In this way, she hopes to get the kids to make less noise. Marjorie is probably going to measure learning as a change in response ____.

- A. topography
- B. intensity
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5. In a cumulative record, learning is indicated by a change in response ____.

- A. topography
- B. amplitude
- C. speed
- D. rate

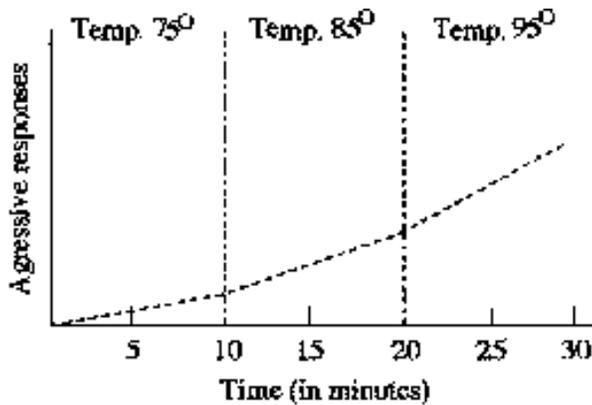
6. The figure below shows the results of an experiment comparing the effects of two teaching methods. Phyllis was taught by method A; Gertrude was taught by method B. This study is an example of ____.



Average performance on 10 spelling tests (20 items each) following 2 methods of instruction.

- A. between-subjects design
- B. within-subject design
- C. random assignment
- D. yoked control

7. The figure below shows the results of an experiment on the effects of heat on aggressive social behavior. There is a sharp increase in the rate of aggressive behavior when the temperature goes above 90. This study is best described as _____.



Aggression and temperature. Cumulative responses in 10 rats all exposed to 3 different temperature conditions.

- A. between-subjects experiment
- B. within-subject experiment
- C. case study
- D. anecdotal evidence

8. When a behavior is defined by the procedure used to measure it, the definition is said to be _____.

- A. mechanistic
- B. lexicographic
- C. procedural
- D. operational

9. The kind of experiment that is most likely to require statistical analysis is a _____.

- A. between-subjects experiment
- B. within-subject experiment
- C. ABA experiment
- D. descriptive study

10. The kind of study that is most likely to involve a large number of subjects is one with a _____.

- A. between-subjects design
- B. within-subject design
- C. ABA design
- D. matched sample

11. In within-subject experiments, each subject's performance is compared with its performance during a ____.
- A. control period
 - B. random sampling period
 - C. baseline period
 - D. benchmark session
12. A person who says, "Everyone knows that...." is referring to ____.
- A. anecdotal evidence
 - B. case study evidence
 - C. descriptive research evidence
 - D. experimental research evidence
13. Using an ABA reversal design is rather like using a ____.
- A. dust mop
 - B. fountain pen
 - C. light switch
 - D. barber's chair
14. Experiments done in natural settings are called ____.
- A. natural experiments
 - B. spontaneous experiments
 - C. unplanned experiments
 - D. field experiments
15. ____ wrote, "My business is to teach my aspirations to conform themselves to fact, not to try and make facts harmonize with my aspirations."
- A. Charles Darwin
 - B. B. F. Skinner
 - C. Brian Weiss
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16. ____ called learning the "great problem in all human psychology."
- A. Ivan Pavlov
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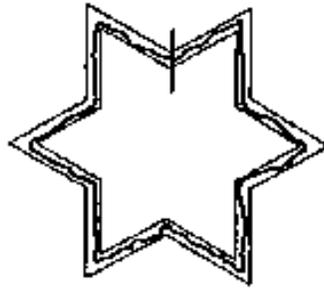
17. A ____ explanation is one in which the evidence for the explanation of an event is the event itself.

- A. scientific
- B. circular
- C. logical
- D. redundant

18. The figure below shows learning as a change in ____.



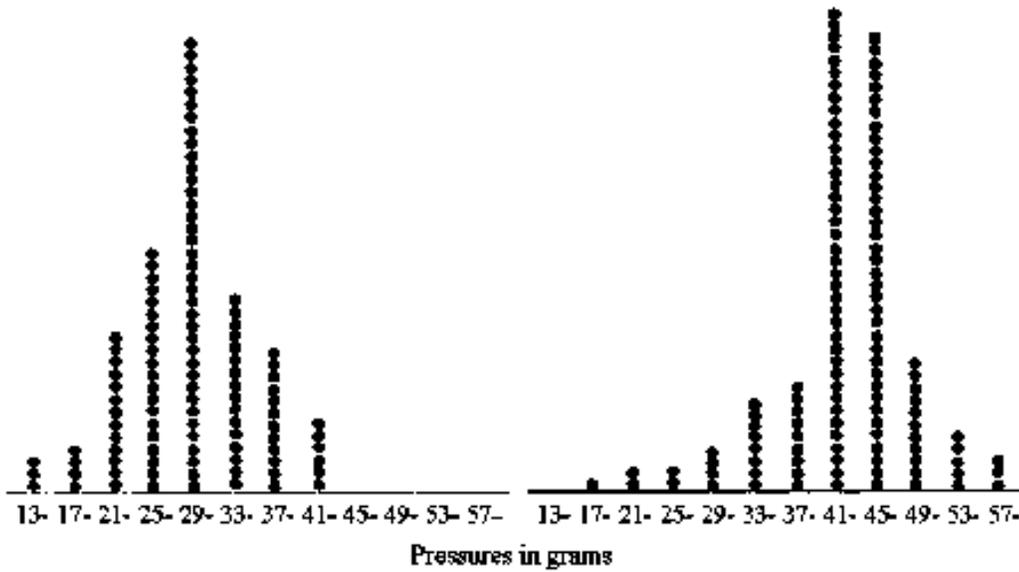
Trial 1



Trail 15

- A. intensity
- B. frequency
- C. topography
- D. redundancy

19. The figure below shows learning as a change in ____.



- A. intensity
- B. frequency
- C. topography
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20. A teacher who looks for an increase in the number of correct performances per minute is using ____ as a measure of learning.

- A. topography
- B. speed
- C. rate
- D. fluency

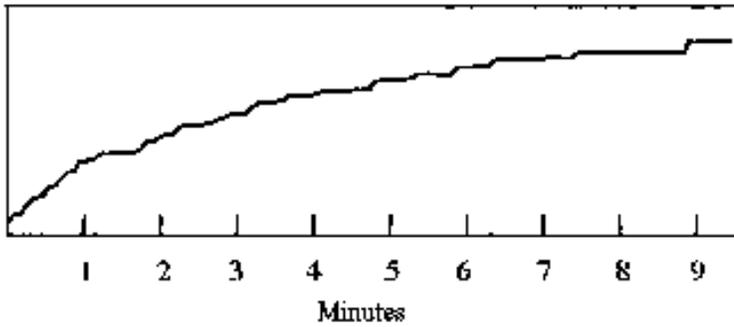
21. One highly readable little book on research methods mentioned in your text is called ____.

- A. The Idiot's Guide to Behavioral Research
- B. Research Made Simple
- C. Psychological Research: An Introduction
- D. Random Designs

22. One problem with computer simulations as a substitute for animal research is that ____.

- A. they are terribly expensive
- B. they take years to develop
- C. "bugs" in the software distort the findings
- D. no one knows what behavior to program until the research has been done

23. In the cumulative record below, the rate of behavior is ____.



- A. increasing
- B. decreasing
- C. stable
- D. fluctuating wildly

24. Fluency is also known as ____.

- A. rate
- B. automaticity
- C. cumulative rate
- D. frequency

25. Any variable an experimenter manipulates is a/an ____ variable.

- A. autonomous
- B. dependent
- C. independent
- D. synchronous

26. Any variable that is allowed to vary freely is a/an ____ variable.

- A. autonomous
- B. dependent
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27. In group-design experiments, researchers often use ____ to reduce differences among participants.

- A. clones
- B. statistics
- C. DNA matching
- D. matched sampling

28. Experimental research on behavior is often said to be artificial. To compensate for this problem, researchers do ____.
- A. field experiments
 - B. open-ended research
 - C. follow-up studies
 - D. free sampling research
29. Balster and colleagues suggest that inhumane treatment of research animals is ____.
- A. not good PR
 - B. expensive, in the long run
 - C. bad science
 - D. likely to result in litigation
30. A computer simulation that is useful for teaching certain principles of learning is called ____.
- A. MacAnimal
 - B. Animal Trainer
 - C. Sniffy the Virtual Rat
 - D. Howard the Holographic Hog
31. The natural science approach emphasizes physical events.
True False
32. *Speed* and *rate* are different terms for the same measure of learning.
True False
33. Learning researchers note that results with humans usually parallel those with animals.
True False
34. B. F. Skinner was the first person to record data cumulatively.
True False
35. A cumulative record shows the total number of responses that have occurred in a given period of time as well as the rate at which they occurred.
True False

36. A change in the form that behavior is called is a change in _____.

37. One thing researchers can control better with animal subjects than with human subjects is _____.

38. Response _____ refers to the time that passes before a response occurs.

39. When a thing is defined by the procedure used to measure it, we speak of a/an _____.

40. A flat cumulative record indicates that the behavior is _____.

41. Discuss the various ways of measuring learning.

42. Explain how a cumulative recorder works.

43. Explain the difference between within-subject and between-subjects experiments.

44. Explain why random assignment of subjects is unnecessary in ABA experiments.

45. Discuss the ethics of using animals for research on learning.

Chapter 2--The Study of Learning and Behavior **Key**

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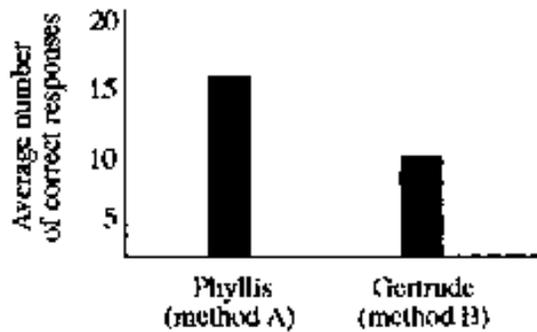
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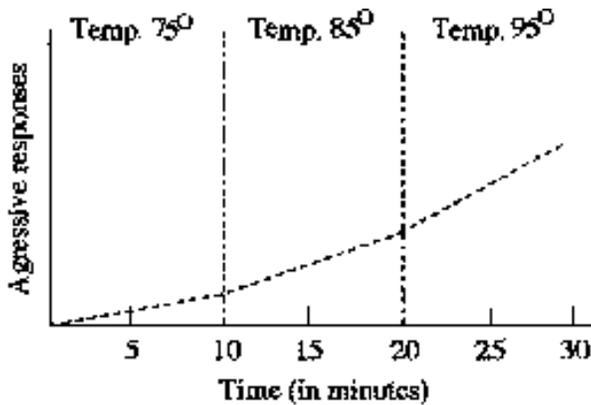
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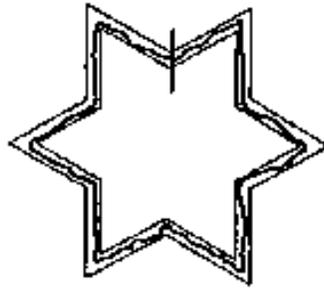
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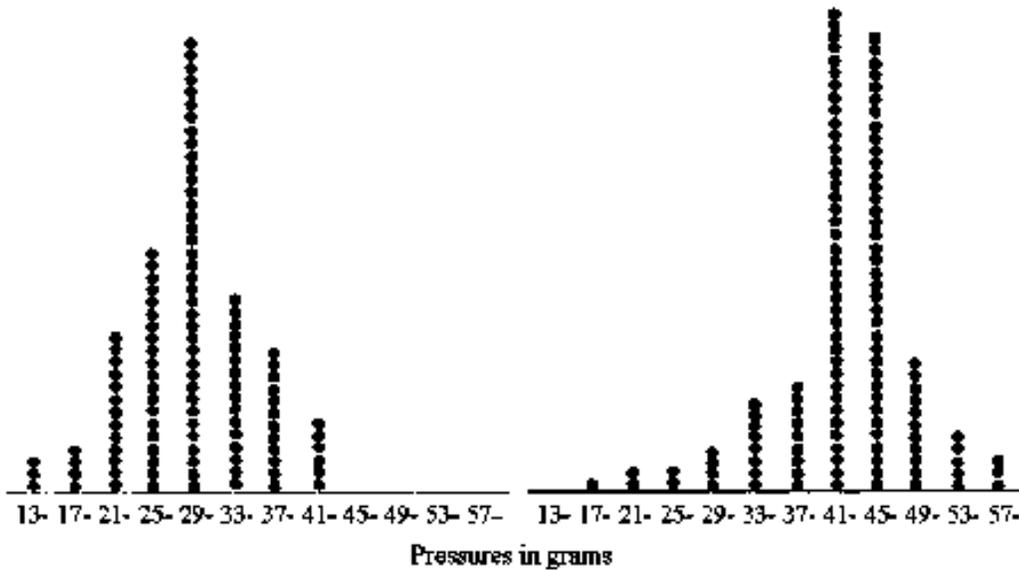
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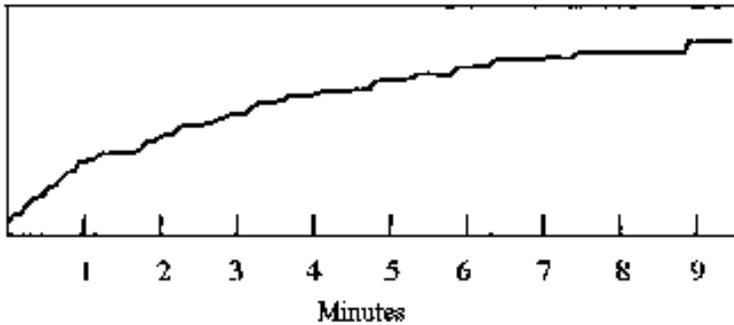
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FALSE

35. A cumulative record shows the total number of responses that have occurred in a given period of time as well as the rate at which they occurred.

TRUE

36. A change in the form that behavior is called is a change in _____.

topography

37. One thing researchers can control better with animal subjects than with human subjects is _____.

genetic history *or*
environmental history *or*
learning experiences

38. Response _____ refers to the time that passes before a response occurs.

latency

39. When a thing is defined by the procedure used to measure it, we speak of a/an _____.

operational definition

40. A flat cumulative record indicates that the behavior is _____.

not occurring

41. Discuss the various ways of measuring learning.

Answers should name and describe topography, errors, intensity, speed, latency, rate, and perhaps fluency.

42. Explain how a cumulative recorder works.

An inked pen leaves a line on a moving sheet of paper. Each response causes the pen to move at right angles to the direction of the paper, so that the rate of responding is reflected in the slope of the line. Some students might mention that today's cumulative recorders are software programs running on computers.

43. Explain the difference between within-subject and between-subjects experiments.

In between-subjects experiments, two or more groups of subjects perform under different conditions and the performance of the groups is compared. In within-subject experiments, each subject performs under different conditions; the performance of a subject in one condition is compared with the performance of that subject in another condition.

44. Explain why random assignment of subjects is unnecessary in ABA experiments.

Random assignment is meant to control for inter-subject variability. Each subject is compared against himself or herself, so inter-subject variability is eliminated.

45. Discuss the ethics of using animals for research on learning.

Answers may note that some people argue that humans have no more right to use animals for research than animals have to use humans. This argument implies that it is wrong to use animals for farm work, for entertainment, and even for household pets. If those uses are allowed, why not research? Another argument says that animal research is unethical because computer simulations render it unnecessary. But computers can be programmed to simulate behavior only after we know how the organism behaves.