

University of California, Berkeley
Department of Psychology

Psychology W1
Summer 2017
Midterm Examination 1

KEY
Correct answers
marked with a double
asterisk (**)

Final Feedback

What follows is the final feedback on Midterm Examination 2 – the correct answers and brief explanations of them, as well as the results of the item analysis.

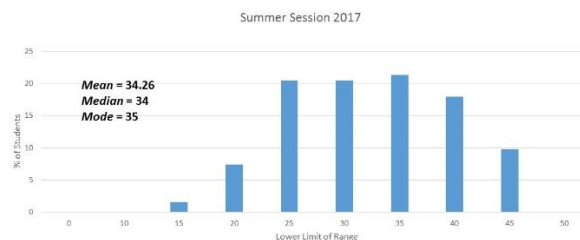
On initial scoring, the mean score on the exam was 32.02, $SD = 7.54$ (64%). The reliability of the exam, measured by Cronbach's "coefficient alpha", was .85, which is excellent. Statistical analysis, following the procedures described in the Exam Information page of the Lecture Supplements revealed three (3) "bad" items: #11, 26, and 34. In addition, Item #16 was miskeyed, and #18 had two correct answers.

Items 11, 26, and 34 were rescored correct for all responses, and Items 16 and 18 were corrected. The average score on the rescored exam rose to 34.26, $SD = 7.65$, or 68% -- right in the middle of the usual range (65-70%) for my exams.

Exam scores posted to the bCourses gradebook reflect the rescoring. Many students saw their scores go up by 1-3 points.

The figure shows the distribution of scores on Midterm 1.

Distribution of Midterm 1 Scores



Choose the *best* answer to each of the following 50 questions. Questions are drawn from the text and lectures in roughly equal proportions, with the understanding that there is considerable overlap between the two sources. Usually, only one question is drawn from each major section of each chapter of the required readings; again, sometimes this question also draws on material discussed in class. Read the

entire exam through before answering any questions: sometimes one question will help you answer another one.

Most questions can be correctly answered in one of two ways: (1) by fact-retrieval, meaning that you remember the answer from your reading of the text or listening to the lecture; or (2) inference, meaning that you can infer the answer from some general principle discussed in the text or lecture. If you cannot determine the correct answer by either of these methods, try to eliminate at least one option as clearly wrong: this maximizes the likelihood that you will get the correct answer by chance. Also, go with your intuitions: if you have actually done the assigned readings and attended the lectures, your "informed guesses" will likely be right more often than they are wrong.

A provisional answer key will be posted to the course website tomorrow, after the window for the exam has closed. The exam will be provisionally scored to identify and eliminate bad items. The exam will then be rescored with bad items keyed correct for all responses. Grades on the *rescored* exam will be posted to the course website. A final, revised, answer key, and analyses of the exam items, will be posted on the course website after grades are posted.

This is a closed-book, closed-notes exam.

1. Why did psychologists of the early 1900s stop defining psychology as the study of mind?
 - a. Science deals only with the observable. **
 - b. Bigger research grants were available for other topics.
 - c. Early research proved that many people do not have a mind.
 - d. Psychologists wanted to concentrate on unconscious thinking.

79% of the class got this question correct; item-to-total $r_{pb} = .37$. Chapter 1. John B. Watson and other behaviorists argued that science deals with objective events that are publicly observable. Mental states and processes are inherently subjective and private, and therefore cannot be subject to scientific investigation. Therefore, scientific psychologists should focus on what they can publicly observe, which is organisms' overt behavior.

2. Psychologists made progress in understanding sensation than emotion or personality. Why?
 - a. Traditionally, psychologists have found sensation to be more interesting.
 - b. Psychologists can measure sensation more accurately. **
 - c. None of the research on sensation requires expensive equipment.
 - d. Several theories have been proposed about sensation, but not about personality or emotion

94% correct, $r_{pb} = .22$. Chapter 1, p. 17. Early psychologists in the late 1800s and early 1900s wanted to understand mental experience and thought that experience consists of sensations. Compared to studying emotion or personality, sensation was easier to begin studying with more answerable research questions back then.

3. According to adherents of determinism, why can we not completely predict people's behavior?
 - a. People have a free will that goes beyond the theoretical limits of science.
 - b. Researchers have not yet mapped the human genome in enough detail.
 - c. The mind is separate from the brain.
 - d. Many small influences have measurable consequences on behavior. **

68%, .37. Chapter 1, p. 4. Psychologists' predictions cannot be completely accurate because they are not yet able to measure every single influence upon human behaviors: "The research progress is limited by the difficulty of measurement."

4. Which of these was a major research goal for Wilhelm Wundt's early psychological laboratory?
- To find elements of experience, similar to the elements of chemistry **
 - To find causes and treatments for common types of mental illness
 - To isolate the genes that influence behavior, especially intellectual development
 - To find ways to understand people's unconscious thought processes

71%, .41. Chapter 1, p. 15: Wilhelm Wundt thought that psychology's elements included sensations and feelings and that these fundamental elements make up experience. Experience is able to be partly controlled voluntarily, and a person can shift attention between elements to have different experiences. He tested this by recording changes within subjects' introspective reports of the intensity and quality of their sensations when presented with various stimuli such as lights, textures and sounds.

5. During the mid-1900s, what was the main focus of psychological research?
- Observable behaviors **
 - Unconscious motivations
 - The structure of the mind
 - The evolution of intelligence

75%, .32. Chapter 1, pp. 19-20. During the rise of behaviorism in the mid-1900s, most researchers described psychology mainly as the study of behavior, not of motivations, minds, or intelligence since these processes within individuals are not as observable. They wanted to establish simple stimulus-response laws of behavior. Observable behaviors were more clearly observable and, thus, easier to study empirically than the other answer choices.

6. Which of the following represents the correct historical sequence of the development of scientific psychology?
- Clinical, Social/Personality, Experimental
 - Sensation/Perception, Learning/Memory, Social/Personality **
 - Learning/Memory, Sensation/Perception, Clinical
 - Social/Personality, Clinical, Sensation/Perception

76%, .49. Lecture 1, 21:39. The emergence of scientific psychology began with scientific attempts to link body and mind—Psychophysics (Weber, 1830; Fechner, 1860), Physiological Psychology (including Reaction Time studies by Helmholtz, 1850; and Donders, 1868). This happened despite earlier philosophers such as Rene Descartes deeming the mind as something that cannot be studied as a science (i.e., psychology is an "impossible science").

28:48. Sensory/perception lab studies were conducted and could be studied quantitatively in the late 1800s through the early 1900s (e.g., Wundt, 1900; From "Immediate Experience" to "Higher Mental Processes..."; Memory, Ebbinghaus, 1885; Learning, Pavlov, 1898; Thorndike, 1898; Thinking, Hull, 1920).

29:57. Early 20th Century Mental life beyond Cognitive Processes "...and Beyond" Emotion and Motivation (Cannon, 1915), Psychopathology (Kraepelin, Jung, Shakow), 31:21: "Individual Differences" in mental functions—Personal Equation (Bessel), Mental Measurement (Galton), Intelligence (Benet & Simon, Terman, Wechsler)

33:35. "Personality and Attitudes": Personality Measurement (Woodworth Personal Data Sheet, 1917; Bernreuter Personality Inventory, 1931), Attitude Measurement (Thurstone & Chave, 1929; Likert, 1932)

34:20. "Completing the Circle"—Experimental Social Psychology (Triplett, 1898; Sherif, 1935), Experimental Personality Research (Shakow, 1930s; Murray et al., 1938)

7. Psychology differs from Cognitive Science in that:

- a. Psychology is concerned with emotion and motivation as well as cognition. **
- b. Cognitive science is concerned with behavior as well as knowledge.
- c. Cognitive science is interested in language as well as the mind.
- d. Psychology is more closely tied to philosophy.

79%, .35. Lecture 1, 35:28. Cognitive Science is mainly concerned with cognitive processes and structures of the mind that are studied in psychology and in other fields.

8. Neurons differ most strikingly from other body cells with regard to what?

- a. Neurons are warmer than other cells.
- b. Neurons have distinctive shapes. **
- c. Neurons, unlike other cells, contain no proteins.
- d. Neurons have more chromosomes than other cells.

95%, .27. Chapter 3, p. 59. "Neurons are similar to other body cells in most ways. The most distinctive feature of neurons is their shape, which varies depending on whether they receive information from a few sources or many and whether they send impulses over a short or a long distance (Figure 3.2)."

9. How do nearly all drugs with behavioral effects alter brain activity?

- a. They attach to chromosomes and alter gene expression.
- b. They dilate or constrict blood vessels.
- c. They increase or decrease conduction velocity of action potentials.
- d. They alter activity at synapses. **

91%, .26. Chapter 3, p. 68. "Psychoactive drugs alter experience by altering activity at synapses."

10. Why are people more likely to die from overdoses of opiates than from overdoses of marijuana?

- a. The brain areas that control heart rate and breathing have few marijuana receptors. **
- b. If marijuana begins to slow heart rate, people become placid and stop using the drug.
- c. Opiates cause sodium to enter neurons, and marijuana causes potassium to enter.
- d. Opiates dissolve in the fats of the body, but marijuana does not.

76%, .38. Chapter 3, p. 72. Answer to Concept Check 10: “Opiate receptors are abundant in the medulla, which controls heart rate and breathing. The medulla has few receptors sensitive to marijuana.”

11. One person became blind because of eye damage and another because of damage to the visual cortex. How do they differ?

- a. The one with eye damage can describe what an object is, without knowing where it is.
- b. The one with eye damage can learn to identify colors by touching them.
- c. The one with cortical damage still wakes up when the sun rises ******.
- d. The one with cortical damage still has visual imagery and visual dreams.

39%, .01. A bad item. Chapter 3, p. 76. Intact eyes still send impulses to other areas of the brain. Therefore, the area that controls wakefulness and sleep still gets normal stimulation.

12. What is the role of the chemical compounds “acetyl” and “methyl” in epigenetics?

- a. They increase or decrease the probability of a gene mutation.
- b. They increase or decrease the expression of certain genes. ******
- c. They induce the duplication of certain chromosomes.
- d. They imitate the effects of sex-linked genes.

91%, .25. Chapter 3, p. 92. Chemicals in the acetyl and methyl groups activate and inactivate genes by loosening or inactivating DNA that is wrapped into balls by proteins called histones. This process is controlled by environmental influences.

13. In Selye’s “General Adaptation Syndrome”:

- a. the “gross emotional reaction” remains at high levels until the organism becomes exhausted and dies.
- b. the onset of parasympathetic activity leads to a diminution of emotion. ******
- c. exhaustion, followed by death, is caused by overactivity in the sympathetic nervous system.
- d. the parasympathetic nervous system acts to amplify sympathetic activity, leading to a positive feedback loop.

36%, .37. Lecture 2, 26:00. As stress continues, there is decreased emotionality as the parasympathetic system kicks in and counteracts the sympathetic nervous system.

14. Coma is associated with damage in the _____, while the “locked-in” syndrome is associated with damage in the _____.

- a. cerebellum; hypothalamus
- b. hippocampus; pons
- c. reticular formation; pons ******
- d. hippocampus; amygdala

73%, .47. Lecture 3. 30:45. Cause of coma is damage to the reticular formation. 34:15. In “locked-in” syndrome, damage is to the anterior brain stem, including portions of the pons.

15. In MacLean's concept of the "Triune Brain":

- a. the cerebral cortex is part of the "Old Mammalian Brain"
- b. the "R-Complex" consists of the brain stem and neocortex.
- c. the "New Brain" consists of the amygdala, hypothalamus, and hippocampus.
- d. none of the above is true. **

70%, .27. Lecture 3. 44:20-44:34. The cerebral cortex is part of the "New Brain." The R-Complex consists of the brain stem and cerebellum. The "Old Mammalian Brain" consists of the amygdala, hypothalamus, and hippocampus.

16. The primary auditory cortex is situated:

- a. anterior to the longitudinal fissure.
- b. in the superior temporal gyrus. **
- c. in the inferior frontal gyrus.
- d. posterior to the pre-occipital notch.

This item was initially miskeyed. The correct answer is (b). Lecture 4. 20:15=20:49 In the temporal lobe, the primary auditory cortex is located in the superior temporal gyrus Heschl's Gyrus (A1), the primary auditory cortex, is the middle of three gyri. It corresponds to Brodmann areas 41 and 42.

17. A lesion in the right parietal lobe, near the temporal lobe, will result in:

- a. an impairment in controlled processing.
- b. an impairment in automatic processing.
- c. neglect of objects in the left visual field. **
- d. neglect of objects in the right visual field.

54%, .24. Lecture 4. 38:45-39:06. Damage at the temporal-parietal junction, develop hemispatial neglect. Subjects fail to pay attention to areas of space on the opposite side from the lesion.

18. The right hemisphere appears to be somewhat better at _____, while the left hemisphere appears to be somewhat better at _____.

- a. spatial analysis; language
- b. spatial analysis; sequential analysis **
- c. sequential analysis; language
- d. mathematical computation; pattern recognition

20%, .28. Due to an error, this question had two right answers, (a) and (b), and students were given credit for either one. Lecture 5. 8:40-10:07 The left hemisphere is specialized for language, sequential analysis, mathematical calculation, and fine motor control (especially for controlling the right hand). The

right hemisphere is specialized for “simple” functions of the left hemisphere, spatial analysis, and pattern perception, especially in the visual and auditory domains.

19. The distributed view of knowledge representation states that:

- a. most mental functions require the coordinated activity of different centers or systems in the brain.
- b. individual items of knowledge are represented neurally as a pattern of activity involving large portions of cerebral cortex. **
- c. different items of knowledge are represented neurally as clusters of adjacent neurons.
- d. there is a great deal of redundancy in functional specialization.

56%, .39. Lecture 5. 28:00-31:06. Lashley’s “search for the engram” experiments resulted in the distributed view as the dominant view of knowledge representation. Items of knowledge are distributed widely in the cerebral cortex in large ensembles of neurons. As long as a critical mass of neurons is preserved, the knowledge is preserved—the law of mass action.

20. A good scientific theory SHOULD have which of the following features?

- a. It is based on many complex assumptions.
- b. It makes falsifiable predictions. **
- c. It can agree with almost any observation.
- d. It is based on illusory correlations.

62%, .33. Chapter 2, p. 28. Falsifiable means we can imagine evidence that invalidates a theory. A good scientific theory is stated in clear and precise terms that let us readily imagine evidence against it.

21. Some people believe in the existence of the “abominable snowman.” Others doubt its existence. Who has the burden of proof, and why?

- a. Those who believe in the abominable snowman have the burden of proof because they are defending the more popular point of view.
- b. Those who believe in the abominable snowman have the burden of proof because they might be able to find evidence, and the doubters could not. **
- c. Those who doubt the abominable snowman have the burden of proof because they are defending the more popular point of view.
- d. Those who doubt the abominable snowman have the burden of proof because they might be able to find evidence, and the believers could not.

82%, .40. Chapter 2, p. 29. In science, the burden of proof is on the person that makes the claim. The believer has an obligation to demonstrate or present evidence to support the claim.

22. Why is an anecdote not considered strong evidence?

- a. An anecdote is part of an experiment.
- b. An anecdote is not replicable. **
- c. An anecdote is falsifiable.

d. An anecdote is observed in a double-blind manner.

76%, .38. Chapter 2, p. 30. Anecdotes are not scientific evidence. They are stories of events that happen by bizarre coincidence. They do not reliably predict reoccurrences of the event. Furthermore, they are frequently told in such vague terms that many, sometimes conflicting, interpretations are possible.

23. Which of the following is an operational definition of “religiosity”?

- a. A belief in a supreme being
- b. The opposite of atheism
- c. The frequency of attending worship services **
- d. A deep sense of oneness with the universe

53%, .39. Chapter 2, p. 34. Some subjects might attend worship services for social approval instead of religiosity. However, we consider the frequency of attendance to be indicative of religiosity, and that allows us to measure the trait.

24. A researcher tests whether people with a long index finger behave differently from people with a long ring finger. What kind of research is this?

- a. Case history
- b. Correlation **
- c. Single-blind experiment
- d. Double-blind experiment

80%, .20. Chapter 2, p. 39. This is a correlational study. To get an accurate correlation coefficient, the researcher must take care in deciding what and how to measure. For example, what is a long index or ring finger? What kind of behavior is being measured? What about people with both index and ring fingers that are long?

25. In the following distribution of scores:

1, 2, 3, 3, 4, 6, 9, 9, 10, 20

the *best* estimate of central tendency is:

- a. 6.70
- b. 3.00
- c. 9.00
- d. 5.00 **

46%, .33. Lecture 6. 7:00-13:00. The 20 in the distribution is an outlier that skews the mean towards the right, to 6.70. A better estimate of the central tendency is the median of 5:00.

26. Correlational studies differ from experimental studies in that:

- a. correlational studies can prove the direction of causality.

- b. in correlational studies, the independent variable is manipulated by the researcher.
- c. in experimental studies, the dependent variable is under experimental control. **
- d. experimental studies have more demand characteristics.

51%, .05. A bad item. Lecture 6. 31:00. In experimental studies, manipulation of the independent variable has a measurable effect on the dependent variable. Thus, the dependent variable is under experimental control. Unfortunately, there was a typo in Option (c), which should have read “*independent variable*”. So we rescored this item correct for all responses. Half of the class got it right, perhaps because they missed the typo; but still, it was a bad item.

27. What is the goal of behaviorism?

- a. To teach people to get along with one another peacefully
- b. To understand the conscious and unconscious thoughts that produce behavior
- c. To understand behavior in simple nonmentalistic terms **
- d. To trace behaviors to underlying genetics and brain processes

63%, .38. Chapter 6, p. 187. Behaviorists object to statements about mental states, so they concern themselves only with what animals and people behavior (what they do). “Any statement about mental experiences can be converted into a description of behavior.” Mental states are just intermediate steps in behavior caused by events in the environment.

28. According to classical conditioning interpretation of drug tolerance, which procedure should lead to extinction of the tolerance (and therefore increased response to the drug)?

- a. Lengthening the delay between one drug administration and the next one
- b. Getting regular amounts of sleep at the same time each night
- c. Taking the drug repeatedly in the same place, under the same conditions
- d. Going through the injection procedure, without the drug itself **

48%, .51. Chapter 6, p. 192. This happens when conditioned stimuli produce conditioned responses that resemble unconditioned responses. Then the body’s developed tolerance for the drug can be lowered by taking away some of the conditioned stimuli (e.g., shooting up in an unfamiliar place under unusual circumstances). Users might actually overdose from their usual dose.

29. Because Thorndike’s cats learned gradually instead of suddenly, what did he conclude?

- a. The cats learned by classical conditioning, not operant conditioning.
- b. The cats learned by gaining an understanding of the situation.
- c. Learning means increased sensitivity at glutamate synapses.
- d. Learning means strengthening responses, not gaining insights. **

66%, .47. Chapter 6, p. 199. This is called operant conditioning. Subjects learn to operate on the environment to produce an outcome. No understanding or insight is involved. According to the “law of effect,” responses that are closely followed by satisfaction will be more likely to occur in a similar situation.

30. If you want to make a punishment more effective in deterring a behavior, what should you do?
- Deliver the punishment on a variable-interval schedule.
 - Deliver the punishment on a variable-ratio schedule.
 - Make the punishment quick and predictable. **
 - Announce that only some of the people who break the rule will receive punishment.

60%, .26. Chapter 6, p. 201. Delayed or uncertain punishment is not effective. The immediate pain from touching a hot stove is effective in deterring such behavior in the future. The long delay in getting cancer from smoking is not as effective a deterrent.

31. Birdsong learning is unusual in what way?
- Females learn significantly faster than males.
 - The learned song is forgotten unless it is practiced daily.
 - Birds cannot begin to learn until they are several years old.
 - Learning occurs while the bird makes no response and gets no reinforcement. **

92%, .30. Chapter 6, p. 212. This learning usually takes place during a “sensitive period” of development. It is similar to the sensitive period that human children go through when learning language.

32. Reflexes and taxes differ from instincts in that:
- reflexes and taxes involve the entire skeletal musculature.
 - reflexes and taxes are products of evolution by natural selection.
 - instincts are highly discriminative responses to stimulation. **
 - instincts permit individuals to adjust flexibly to changes in their environment.

76%, .44. Lecture 7. 13:48-22:30. Reflexes and taxes are not very discriminating about stimulation. For example, a patellar reflex can be evoked by many kinds of objects, and a snail will demonstrate geotaxis when encountering any solid obstacle. Instincts, however, require more complicated stimuli for evoking a response—for example, a hawklike shape passing overhead for a goose to show an alarm reaction.

33. In a classical conditioning experiment, extinction trials are continued beyond the point at which the conditioned response has disappeared entirely. The result will be:
- Nothing, as there is nothing left to extinguish.
 - A flattening of the generalization gradient, so that the animal now responds positively to a wide variety of test stimuli.
 - Suppression of spontaneous recovery. **
 - Enhanced response to the unconditioned stimulus, once reacquisition trials have begun.

64%, .37. Lecture 8. 09:00-09:32. If we continue extinction (presenting the CS without reinforcement of US), the CR will extinguish all over again.

34. The cumulative record produced by a “variable interval” schedule of reinforcement is characterized by:

- a. a steady, relatively high rate of responding.
- b. a steady, relatively low rate of responding. **
- c. a pause after each reinforcement, followed by a relatively high rate of responding.
- d. a pause after each reinforcement followed by a gradual increase in response rate.

17%, -.10. A really bad item! Lecture 8. 43:50-44:10. Variable schedules of reinforcement produce a constant, stable rate of response. A variable ratio schedule produces a high rate of responding. A variable interval schedule produces a low rate of responding.

35. The outcome of Garcia's studies of taste-aversion learning violate:

- a. the matching law.
- b. the arbitrariness principle. **
- c. the preparedness principle.
- d. the law of effect.

62%, .46. Garcia & Koelling's "bait shyness" experiments with rats showed that organisms are biologically predisposed to learn certain associations through their evolutionary environments.

36. "Backwards" conditioning procedures:

- a. produce good conditioning, because extinction has already been accomplished.
- b. produce poor conditioning, because the CR is not contingent on the UR. **
- c. produce good conditioning, because extinction enhances spontaneous recovery.
- d. produce poor conditioning, because of the increased delay between CS and US.

63%, .48. Lecture 9. 30:34-32:40. In backwards conditioning, the CS follows the US. In this situation, no conditioning occurs. It inhibits formation of the CS.

37. "Learned helplessness" occurs when:

- a. the CS is uncontrollable.
- b. the US is uncontrollable. **
- c. the CR is unpredictable.
- d. the UR is unpredictable.

56%, .40. Lecture 10.05:20-05:52. Learned helplessness reflects negative expectations of control. In Seligman & Maier's (1967) experiments, rats were shocked after CS no matter what response they gave. The shock was inescapable and unavoidable.

38. According to cognitive social learning theory, what is acquired during learning?

- a. behavioral responses to conditioned stimuli.
- b. contra-prepared responses to conditioned stimuli.
- c. expectations concerning outcomes. **
- d. matched-dependent imitation.

38%, .35. Lecture 10. 42:20-42.54. Bandura recognized that social learning is the acquisition, not of behavior, but of knowledge of expectations

39. Is it true that cats can see in complete darkness? If so, how?
- Cats see by sending out powerful sight rays.
 - Cats see by extrasensory means.
 - Cats can see in the dark, but no one knows how they do it.
 - No, vision in complete darkness is impossible. **

74%, .55. Chapter 4, p. 103. Animals “see” by translating light rays into different representations. Concept Check: “Like people, cats adapt to dim light. However, cats, like all other animals, see only when light strikes the eyes. In total darkness, vision is impossible.”

40. Which of the following supports the opponent process theory of color vision?
- If you stare at a blue object and look away, you see yellow. **
 - You see colors clearly in the center of vision but poorly toward the periphery.
 - You can mix three colors of light to match any other color.
 - Changing the color of the surround can change the apparent color of an object.

86%, .42. Chapter 4, p. 109. Opponent-Process Theory: “We perceive color in terms of paired opposites—red versus green, yellow versus blue, and white versus black.” Yellow is the negative afterimage of blue.

41. Many older people have hearing problems despite good hearing aids. What is one reason?
- They have trouble holding their heads in the best position for hearing.
 - They become too nervous and pessimistic about their hearing.
 - They often become drowsy while trying to listen.
 - They have trouble filtering out the irrelevant sounds **.

91%, .13. 113-114. Hearing aids amplify the sound delivered to the eardrum, but they don’t do anything for the neural signal after transduction has occurred. Some elderly people have difficulty hearing and interpreting sounds because of hearing-related deterioration of the cortical centers that mediate language processing, or those that mediate selective attention.

42. It is easier to read while shaking your head than while shaking the page. Why?
- The vestibular sense moves your eyes to compensate for head movements. **
 - The lenses of your eyes cannot focus on a moving object.
 - You have had more practice at shaking your head than at shaking the page.
 - Shaking the page prevents light rays from traveling in a straight line.

90%, .29. Chapter 4, pp. 116-117. Vestibules in the inner ear detect orientation of the head with respect to gravity. “The vestibular sense detects head movements and compensates with eye movements.” Shaking the page would not activate the vestibular sense.

43. People heard subliminal audiotapes that contained messages different from what they were told to expect. For example, tapes about memory or self-esteem might be mislabeled as the opposite. What is the usual outcome of such studies?

- a. People report improvement in whatever they thought the tapes contained. **
- b. People report improvement in what the tapes actually contained.
- c. People report improvement in both what actual content and the expected content.
- d. People do not report improvement in any regard.

65%, .38. Chapter 4, p. 129. Subliminal messages have very little or no effect. Experiments with subliminal audiotapes showed that improvement depends on the subjects' expectations of what the tapes will do.

44. Chemical reactions are involved in all of the following *except*:

- a. vision
- b. audition **
- c. gustation
- d. olfaction

76%, .35. Lecture 11. 9:28-12:41. The chemical senses, gustation and olfaction, involve chemoreceptors. Additionally, vision involves chemical reactions taking place when the rods and cones are stimulated by light. Audition and most forms of tactile sensation involve mechanoreceptors to detect external stimuli.

45. Colorblindness comes in two major forms: loss of all color sensitivity and:

- a. red and green sensitivity. **
- b. loss of red and blue sensitivity.
- c. loss of green and yellow sensitivity.
- d. loss of red and blue sensitivity.

87%, .30. Lecture 12. 33:57-34:55. Loss of red and green sensitivity is called dichromacy: protanopia, loss of red receptors, and deuteranopia, loss of green receptors. Either one causes loss of both red and green perception.

46. According to Fechner's law:

- a. the absolute threshold is smaller than the relative threshold.
- b. the absolute threshold is larger than the relative threshold.
- c. sensation grows more slowly than stimulation. **
- d. sensation grows more rapidly than stimulation.

72%, .54. Lecture 13.:07:33- 10:26. 09:23. ". . ., sensation changes more slowly than stimulation." The change in sensation is even slower the higher amount of stimulation.

47. In a signal-detection experiment, increasing the base rate of stimulus presentation will:

- a. increase the sensitivity of the receiver-operator system.
- b. decrease the sensitivity of the receiver-operator characteristic.
- c. induce a liberal response bias. **
- d. induce a conservative response bias.

55%, .46. Lecture 13. 16:46- 32:50. Tries to understand real-world signal detection against noise background or changes in stimulation. Takes into account both motivation and expectancy. We can induce a liberal bias for responding “yes” to a signal by decreasing catch trials (having no signal in the noise).

48. Which cue to depth or distance does not belong with the others?

- a. accommodation.
- b. relative size.
- c. linear perspective
- d. convergence. **

51%, .49. Lecture 14. 42:44. Some cues are binocular. Some cues are monocular. Convergence is binocular. Accommodation, relative size, and linear perspective are monocular—along with elevation, superposition, texture gradients, aerial perspective, shadowing, optic flow, and motion parallax.

49. Individual letters can be detected more easily when presented in the context of meaningful words than when presented in meaningless pseudowords. This phenomenon illustrates the importance of _____ in perception.

- a. ecological validity.
- b. the “Law of Pragnanz”
- c. top-down processing **
- d. unconscious inferences

72%, .33. Lecture 15. 37:45-39:39. Higher-level knowledge of words helps to identify lower-level letters—a top-down process. Top-down processing (concept to stimulus) is also called hypothesis-driven processing or expectation-driven processing. Perception involves an interplay between top-down and bottom-up processes.

50. In the constructivist view of perception, the *schema* refers to:

- a. the difference between the distal stimulus and the proximal stimulus.
- b. knowledge, expectations, and beliefs that contribute to perception. **
- c. the mismatch between stimuli and expectations.
- d. the resolution of conflicts between perceptual constancy and perceptual ambiguity.

89%, .31. Lecture 16. 44:33-48:00. Schema are top-down sources of information (world knowledge, expectations, and beliefs). Combined with bottom-up proximal stimuli (figure, ground, primary and secondary modalities), one uses inferential rules (unconscious inferences and conscious problem-solving) to construct perceptions. 46:30- Neisser: A schema is a “preexisting mental representation of the world”—a set of knowledge, expectations, and beliefs.