

Homework 3 Due in class on Thu. Apr. 17, 2008 Please do your own work

Reminder: Homework is due in class on the due date assigned. Late homework will not be accepted. All homework is in a format that is easy to type into an email message, so that it may be emailed by class time if (and only if) you are unable to attend class on the day it is due.

Academic Misconduct: Cheating in any form will not be tolerated. In addition to plagiarism, this includes copying any work from other students, or allowing them to copy from you.

Important Note: Whenever doing problems from the textbook, be sure to look at the starred questions and answers in the back of the book, to see the format for answering, and to better understand the assignment. Be sure to do all assigned problems completely. Each question, or each part of a multi-part question, is worth one homework point.

From the text:

9.3, II, 2, 3, 5, 6, 14, 18 (6 multiple choice – see below), pp. 503-505

9.4, II, 1-5 unstarred (9 numerical questions), pp. 523-524

9.4, III, 1-20 unstarred (13 true-false questions), pp.524-525

9.5, VI, 1-20 unstarred (13 true-false questions), pp. 543-544

Multiple Choice

Identify the letter of the choice that best completes the statement or answers the question.

9.3, II, 2, p. 503 a. 1/6 b. 1/2 c. 1/4 d. 1/8 e. 3/8	9.3, II, 14, p. 504 a. 5/8 b. 7/12 c. 12/20 d. 35/96 e. 12/96
9.3, II, 3, p. 504 a. 2/13 b. 4/52 c. 1/26 d. 3/26 e. 6/52	9.3, II, 18, p. 505 a. 0.73 b. 0.63 c. 0.83 d. 0.54 e. 0.90
9.3, II, 5, p. 504 a. 8/52 b. 4/52 c. 25/169 d. 17/52 e. 6/52	
9.3, II, 6, p. 504 a. 1/8 b. 1/4 c. 3/4 d. 5/6 e. 7/8	

- ___ 1. According to Karl Popper, genuinely scientific hypotheses must be:
 - a. Testable.
 - b. Falsifiable.
 - c. Flexible.
 - d. Verifiable.
 - e. Applicable.
- ___ 2. Ockham's razor is a principle that requires hypotheses to be:
 - a. Complex.
 - b. Functional.
 - c. Simple.
 - d. Empirical.
 - e. Rational.
- ___ 3. A cure that supposedly arises from a "medicine" or procedure having no therapeutic benefit is said to result from:
 - a. The autokinetic effect.
 - b. The medicinal effect.
 - c. The placebo effect.
 - d. The transmutational effect.
 - e. The synthetic effect.
- ___ 4. The effect by which a small stationary light surrounded by darkness will be seen to move is called the:
 - a. Psychokinetic effect.
 - b. Spuriokinetic effect.
 - c. Psychotic effect.
 - d. Kinesthetic effect.
 - e. Autokinetic effect.
- ___ 5. Hallucinations that affect the vision of people in a large crowd are called:
 - a. Popular delusions.
 - b. Galvanic hallucinations.
 - c. Collective hallucinations.
 - d. Amplified delusions.
 - e. Spiritual visions.
- ___ 6. Uri Geller's claims of having psychic power rested on:
 - a. Superstitious evidence.
 - b. Supernatural evidence.
 - c. Transcendental evidence.
 - d. Faked evidence.
 - e. Epiphenomenal evidence.
- ___ 7. When astrological predictions fail to materialize, the community of astrologers typically responds by:
 - a. Ignoring them.
 - b. Reexamining the positions of the planets at the pertinent times.
 - c. Recasting the astrological charts.
 - d. Rereading ancient astrological texts.
 - e. Resetting the astrological clocks.

Writing Assignment (30 homework points)

Read these two articles (available online in course reserves):

(A) “Self-Correcting” by Isaac Asimov, and

(B) ““Why won't they admit they're wrong?’ And other skeptics’ mysteries” by Carol Tavis and Elliot Aronson.

Then write a paper (approximately 1-2 pages in length, double-spaced, 1-inch margins all around, 11-12 point type) that answers the following questions.

1. Briefly explain, according to Asimov, how science is self-correcting.
2. Explain, according to Tavis & Aronson, what cognitive dissonance theory is and how it accounts for mental blind spots.
3. Explain the following two concepts: *confirmation bias*, and *funding bias*.
4. Explain the following statement: “Just as good drivers learn to correct for that blind spot in their rear vision, good thinkers can learn to correct for the blind spots in their reasoning.”