

Quiz Chapter 6

Your answers: shade in the cell that best completes the statement or answers the question

	1	2	3	4	5
a					
b					
c					
d					
e					

1. It is difficult to establish the causal link between cigarette smoking and lung cancer because

a. random allocation of subjects to smoking is unethical. YES

b. observational studies generally cannot rule out confounding. YES

c. those who choose to smoke may be genetically at greater risk for lung cancer than those who don't choose to smoke. MAYBE

d. experiments done on animals may not be valid for humans. MAYBE

e. all of the above.

Quiz Chapter 6

A professor believes that students who smoke cigarettes tend to have lower grades. He collects data from 1326 randomly selected students at his university and discovers that, on average, students who smoke cigarettes do indeed tend to have lower grade point averages than students who do not smoke.

2. This study was based on

- ☒ a. a randomized comparative experiment.
- ☒ b. a matched pairs experiment.
- ☒ c. a voluntary response sample.
- ☒ d. a probability sample.

3. Two essential features of all statistically designed experiments are that they

- a. compare several treatments and use the double-blind method. *not essential*
- ☒ b. compare several treatments and use chance to assign subjects to treatments. *very important*
- c. always have a placebo group and use the double-blind method. *not essential* *not essential*
- d. use a block design and use chance to assign subjects to treatments. *not essential*

chance is very important

Quiz Chapter 6*experiment*

A scientist is designing a clinical trial to test the effect of online chat counseling with migraine sufferers as a supplementary treatment in combating their migraines. Migraine sufferers will have access to counselors via online chat software; the scientist plans to see whether their migraine pain has been reduced after six weeks.

4. Preliminary information suggests that the effect of (face-to-face) counseling is larger for migraine sufferers who are women than men. Knowing this, the scientist would probably use a

- ☒ a. stratified random sample. *← survey*
- ☒ b. completely randomized design.
- ☒ c. block design, with counseling and no counseling as the blocks.

☒ d. block design, with women and men as the blocks.

5. In order to take a sample of 1000 students at a college, a researcher first divides the students into freshmen, sophomores, juniors, and seniors, and then takes a simple random sample of 250 students in each rank. This is an example of

- ☒ a. a block design. *← experiment*
- ☒ b. a stratified random sample. *← survey*
- ☒ c. a double-blind simple random sample.
- ☒ d. a randomized comparative experiment.

Name: _____ Class: _____ Date: _____

Quiz Chapter 6

Answer Key

1. e

2. d

3. b

4. d

5. b