

CHECKING YOUR PROGRESS: A SELF-TEST

1. Converging or crossing lines on a graph of the results of a two-factor experiment often signal a significant
 - a. main effect for factor A.
 - b. main effect for factor B.
 - c. interaction.
 - d. all of the above
2. Which of the following is *not* an advantage of a two-factor design over two separate one-factor experiments?
 - a. a test for interaction
 - b. fewer subjects required
 - c. greater generalizability
 - d. decreased power on the main effects tests
3. An experiment might be done to compare the effects of nicotine and a placebo on hand–eye coordination in smokers and nonsmokers. Different possible outcomes are shown in the following contingency tables. The cell numbers are mean errors on a mirror tracing task. Graph the results, and predict the outcomes of significance tests.

a.

	Placebo	Nicotine
Smoker	15	15
Nonsmoker	8	15

b.

	Placebo	Nicotine
Smoker	15	5
Nonsmoker	5	15

c.

	Placebo	Nicotine
Smoker	15	20
Nonsmoker	5	10