

Key HW 4.2 Part A pages 230 problems 37 - 42

37) C 38) D 39) D 40) C 41) E 42) C

Key HW 4.2 Part A pages 253 - 254 45, 47, 49, 51, 53

- 45) a) Observational because no treatment was imposed on the mothers. The researchers simply asked them to report both their chocolate consumption and their babies' temperament.
- b) Explanatory: Mother's chocolate consumption
Response: Baby's temperament
- c) No. This is an observational study, so we cannot make a conclusion of cause and effect. There could be an extraneous variable (lurking/confounding) that is actually causing the difference in temperament.
- 47) a) Experiment. Students were randomly assigned to the different teaching methods. (Treatments were imposed on the students, those using computers and those using textbooks)
- b) Since this was an experiment with proper randomization, the teacher can conclude that using the computer software appears to result in larger increases in test scores.
- 49) A lurking variable that may lead to confounding with the effects of small class sizes could be parental involvement (Other answers possible)

Small class sizes may have more parental involvement, which could lead to better test scores, staying in school, and going to college. So, if students are scoring better, staying in school, and going to college, we are unsure if it is due to smaller class sizes or parental involvement.

- 51) Experimental units: Pine seedlings
Explanatory variable: amount of light (Light intensity)
Treatments: full light, 25% light, and 5% light
Response variable: dry weight at the end of the study

53) Subjects: Individuals called

Explanatory Variables: (2 factors) 1) info provided by interviewer and 2) caller offered survey results or not

Treatments: all 6 treatments listed in table

		Factor A: Info Provided by Interviewer		
		Name only	University Only	Both Name & University
Factor B: Caller offer survey results or not	Surveyed Offered	1	3	5
	No Surveyed Offered	2	4	6

Treatments: 1) Giving name only and surveyed offered

2) Giving name only and no surveyed offered

3) Giving university only and surveyed offered

4) Giving university only and no surveyed offered

5) Giving both name/university and surveyed offered

6) Giving both name/university and no surveyed offered

Response Variable: Interview completed or not