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15.7

The experimental unit in this study is each taste panel, because each taste panel can represent the general population's opinions on the salsa.

15.10

a. This study is mixed experimental and mixed observational, because although the cars were chosen randomly, the experiment only takes place in one metro city, and there is no indication that the supermarkets were chosen randomly.

b. Factor 1: color of paper, 3 levels (blue, green, orange).

Factor 2: supermarket parking lot, 4 levels.

Factor level combinations: Lot 1 - blue, Lot 1 - green, Lot 1 - orange, Lot 2 - blue, etc..

c. The study being done is **randomized complete block design**. We have each parking lot as a block, and questionnaires randomly assigned to cars at each parking lot.

d. The basic unit of this study is each parking lot.

15.11

a. The study is observational, since it's observing a group (people undergoing collective knee surgery), and it's not randomized.

b. Factor 1: prior fitness, 3 levels (below average, average, above average).

Factor 2: the number of days required in physical therapy until successful rehabilitation

Factor level combination: below average - 1 day, average - 1 day, above average - 1 day, below average - 2 days, etc...

c. **Cross sectional study** is appropriate for this study

d. The basic study in this study is each patient.