

Independent Samples vs. Paired Samples

Which type of sample do we have in each case?

1. To test the effect of background music on productivity, the workers are observed. For one month they had no music. For another month they had background music.
2. A random sample of 10 workers in Plant A are to be compared to a sample of 10 workers in Plant B.
3. A new weight reducing diet was tried on ten women. The weight of each woman was measured before the diet, and again after being on the diet for ten weeks.
4. To compare the average weight gain of pigs fed two different rations, nine pairs of pigs were used. The pigs in each pair were litter-mates.
5. To test the effects of a new fertilizer, 100 plots are treated with one fertilizer, and 100 plots are treated with the other.
6. A sample of college teachers is taken. We wish to compare the average salaries of male and female teachers.
7. A new fertilizer is tested on 100 plots. Each plot is divided in half. Fertilizer A is applied to one half and B to the other.
8. Consumers Union wants to compare two types of calculators. They get 100 volunteers and ask them to carry out a series of 50 routine calculations (such as figuring discounts, sales tax, totaling a bill, etc.). Each calculation is done on each type of calculator, and the time required for each calculation is recorded.