

- Problem 3: Cross-Sectional Study

In a cross-sectional study, the participants are seen at only one point of time. Two samples are said to be independent when the data points in one sample are unrelated to the data points in the second sample.

The problem that demonstrates inference from two independent samples will use hypothetical data from the American Association of Poison Control Centers.

There are two groups of independent data collected in different regions, which also calls for a t-test. The numbers represent the number of recorded cases of poisoning with chemicals in the homes of 100,000 people in two regions.

Table 6: Cases of Poisoning With Chemicals

Year	Region 1	Region 2
1	150	11
2	160	10
3	132	14
4	110	12
5	85	10
6	45	11
7	123	9
8	180	11
9	143	10
10	150	14

Using the Minitab statistical analysis program to enter the data and perform the analysis, complete the following:

- Formulate a null and an alternative hypothesis for a two-sided test.
- Conduct the test at the 0.05 level of significance.

In addition, in a Microsoft Word document, provide a written interpretation of your results in APA format.