Essential Math for Data Analysis Using Excel Online

Challenge Lab 1

Description

Learners will be given a data set looking at the sales of a popular gaming device at 100 stores in each of two regions over the past year: Region 1 and Region 2. Learners will be asked to assess which region has performed better in the past year. Finally, they will be asked to determine whether that is statistically significant or not and, consequently, whether this is a real trend that is likely to continue. Learners will be given more independence than in a normal lab.

Data set

ChLab1.csv

Overview

Imagine you're analyzing the sales of a popular gaming device at 100 stores in each of two regions over the past year: Region 1 and Region 2. Your manager wants you to report on which region performed better for the year and determine whether this trend is likely to continue. In this challenge lab, you won't be provided with the same step-by-step instructions as the previous labs (that's where the "challenge" part comes in). Good luck!

What You'll Need

To complete the lab, you will need the online version of Microsoft Excel.

Exercise 1: Find the Mean

Open the data set in Excel. Column A gives each store number, column B gives the units sold at each store for the past year, and column C gives the region number. The first 100 stores are in Region 1, and the other 100 are in Region 2. With the data set open, answer the following question:

1. What was the mean number of units sold per store in each region?

You'll be asked to answer this question in the "Lab Check" quiz following this lab.

Exercise 2: T-Test Challenge

Using a *t*-test along with your answer to question 1 in the previous exercise, answer the following questions:

1. What is the degree of freedom (*df*) for these two data sets?

2. Is the difference in the means between Region 1 and Region 2 likely to continue in the future?

Once again, you'll answer these questions in the "Lab Check" quiz following this lab.