More Hypothesis Testing about a Single Population Mean

*Exercise 1:*

A cosmetics brand hired several Instagram influencers to post about their makeup in an effort to boost sales. The mean of monthly sales prior to hiring the influencers was $11,000 per month per store. In order to check whether sales are increasing, the company takes a sample of 50 stores and measures monthly sales. The mean of the sample is $11,800, and the standard deviation of the sample is $4500.

Perform and interpret a hypothesis test to find out if the population mean sales have increased at an significance level.