

(Continued)

Fourth, we need to find a critical value with which to compare the t test statistic. With a sample size of 7, that gives us 6 degrees of freedom. Look at Appendix B to locate the critical value. We are using a nondirectional (two-tailed) hypothesis test, so our critical value is ± 2.447 .

Finally, we compare our test statistic (1.87) with the critical value, and we find it falls outside the region of null hypothesis rejection. Therefore, we do not reject the null hypothesis and conclude that the sample was similar to the population from which it was drawn.

2. Would the conclusion we just made (to fail to reject the null hypothesis) have changed had we used a directional (one-tailed) test?

A: In this case, the critical value would have been +1.943. Although smaller than the critical value for a nondirectional test, in this case, we still would fail to reject the null hypothesis.