

10.10: Assignment- Checking Conditions

The purpose of this activity is to give you guided practice in checking whether the conditions that allow us to use the two-sample t-test are met. (Recall that the two-sample t-test is another name for the hypothesis test for a difference in two population means.)

Background

A researcher wanted to study whether or not men and women differ in the amount of time they watch TV during a week. In each of the following cases, you'll have to decide whether we can use the two-sample t-test to test this claim or not.

Case 1

A random sample of 40 adults was chosen (22 of whom were women and 18 of whom were men). At the end of the week, each of the 40 subjects reported the total amount of time (in minutes) that he/she watched TV during that week.

Instructions

Click on the link corresponding to your statistical package to see instructions for completing the activity, and then answer the questions below.

[R](#) | [StatCrunch](#) | [Minitab](#) | [Excel](#) | [TI Calculator](#)

Question 1:

Can we use the two-sample T-test to test this claim?

Case 2

A random sample of 400 adults was chosen (191 women and 209 men). At the end of the week, each of the 400 subjects reported the total amount of time (in minutes) that he or she watched TV during that week.

Instructions

Click on the link corresponding to your statistical package to see instructions for completing the activity, and then answer the questions below.

[R](#) | [StatCrunch](#) | [Minitab](#) | [Excel](#) | [TI Calculator](#)

Question 2:

Can we use the two-sample T-test to test this claim?

Case 3

A random sample of 25 women and another random sample of 25 men was chosen. At the end of the week, each of the 50 subjects reported the total amount of time (in minutes) that he or she watched TV during that week.

Instructions

Click on the link corresponding to your statistical package to see instructions for completing the activity, and then answer the questions below.

[R](#) | [StatCrunch](#) | [Minitab](#) | [Excel](#) | [TI Calculator](#)

Question 3:

Can we use the two-sample T-test to test this claim?

Case 4

A random sample of 50 married couples was chosen, which was split into a sample of 50 men and a sample of 50 women. At the end of the week, each of the 100 subjects reported the total amount of time (in minutes) that he or she watched TV during that week.

Instructions

Click on the link corresponding to your statistical package to see instructions for completing the activity, and then answer the questions below.

[R](#) | [StatCrunch](#) | [Minitab](#) | [Excel](#) | [TI Calculator](#)

Question 4:

Can we use the two-sample T-test to test this claim?

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