

Activities for hypothesis testing: two-sample and paired tests

Activity 1

A clinic provides a program to help their clients lose weight and asks a consumer agency to investigate the effectiveness of the program. The agency takes a sample of 30 people, weighing each person in the sample before the program begins and 3 months later (**clinic_program.xlsx**). Determine whether the program is effective. Suppose that significant level is set as $\alpha=0.05$ and perform a two-tailed test.

Activity 2

A study examined the lung capacity of 725 young individuals (**dataLC.xlsx**). Compare (with the appropriate statistical test) the lung capacity of males and females with Age > 17 years. Suppose that significant level is set as $\alpha=0.05$ and perform a two-tailed test.