

Two Means Independent Samples

1) $H_0: \mu_1 = \mu_2$.

$H_1: \mu_1 \neq \mu_2$.

Test statistic $t = 16.025$.

Critical values: $t = \pm 2.032$.

Reject the null hypothesis. There is sufficient evidence to warrant rejection of the claim that the two samples are from populations with the same mean.

2) $H_0: \mu_1 = \mu_2$

$H_1: \mu_1 < \mu_2$

Test statistic: $t = -1.283$

Critical value: $t = -1.701$

Do not reject H_0 . At the 5% significance level, there is not sufficient evidence to support the claim that the mean amount of time spent watching television by women is smaller than the mean amount of time spent watching television by men.

3) $H_0: \mu_1 = \mu_2$.

$H_1: \mu_1 < \mu_2$.

Test statistic: $t = -8.426$.

Critical value: -2.364 .

Reject the null hypothesis. There is sufficient evidence to support the claim that the treatment group is from a population with a smaller mean than the control group.

4) $H_0: \mu_1 = \mu_2$

$H_1: \mu_1 < \mu_2$

Test statistic: $t = -1.042$

Critical value: $t = -1.725$

Do not reject H_0 . At the 5% significance level, there is not sufficient evidence to support the claim that the mean salary of female employees is less than the mean salary of male employees.

5) B

6) C

7) A

8) A

9) C