

(b) What is the appropriate procedure to test for a significant difference in means between the two groups?

- two-sample  $t$  test for independent samples with unequal variances
- $F$  test for the equality of two variances
- paired  $t$  test
- two-sample  $t$  test for independent samples with equal variances

(c) Implement the procedure in (b) using the critical-value method. (Use  $\alpha = 0.05$ .)

State the null and alternative hypotheses (in  $\ln[\text{calcium intake (mg)}]$ ). (Enter != for  $\neq$  as needed.)

$$H_0: \mu_1 = \mu_2$$

$$H_1: \mu_1 \neq \mu_2$$

Find the test statistic. (Round your answer to two decimal places.)

-1.69

Use technology to find the rejection region. (Round your answers to two decimal places. If the test is one-sided, enter NONE for the unused region.)

test statistic > 2.00

test statistic < -2.00

State your conclusion.

- Fail to reject  $H_0$ . There is sufficient evidence to conclude that there is a significant difference in means between the two groups.
- Fail to reject  $H_0$ . There is insufficient evidence to conclude that there is a significant difference in means between the two groups.
- Reject  $H_0$ . There is sufficient evidence to conclude that there is a significant difference in means between the two groups.
- Reject  $H_0$ . There is insufficient evidence to conclude that there is a significant difference in means between the two groups.

(d) Use technology to find the  $p$ -value corresponding to your answer to (c)? (Round your answer to four decimal places.)

$p$ -value = 0.0954

(e) Compute a 95% CI (in  $\ln[\text{calcium intake (mg)}]$ ) for the difference in means between the two groups. (Enter your answer using interval notation. Round your numerical values to two decimal places.)

-0.65, 0.05

(b) What is the appropriate test procedure to test for significant differences in mean white blood cell count between people who do and people who do not receive a bacterial culture?

- two-sample  $t$  test for independent samples with unequal variances
- two-sample  $t$  test for independent samples with equal variances
- $F$  test for the equality of two variances
- paired  $t$  test

(c) Perform the procedure in (b) using the critical-value method. (Use  $\alpha = 0.05$ .)

State the null and alternative hypotheses (in thousands). (Enter != for  $\neq$  as needed.)

$H_0$ :  ✓

$H_1$ :  ✓

Find the test statistic. (Round your answer to two decimal places.)

✓

Use technology to find the rejection region. (Round your answers to two decimal places. If the test is one-sided, enter NONE for the unused region.)

test statistic >  ✓

test statistic <  ✓

State your conclusion.

- Reject  $H_0$ . There is sufficient evidence to conclude that there is a significant difference in mean white blood cell count between people who do and people who do not receive a bacterial culture.
- Fail to reject  $H_0$ . There is sufficient evidence to conclude that there is a significant difference in mean white blood cell count between people who do and people who do not receive a bacterial culture.
- Fail to reject  $H_0$ . There is insufficient evidence to conclude that there is a significant difference in mean white blood cell count between people who do and people who do not receive a bacterial culture.
- Reject  $H_0$ . There is insufficient evidence to conclude that there is a significant difference in mean white blood cell count between people who do and people who do not receive a bacterial culture.

(d) What is the  $p$ -value corresponding to your answer to (c)? (Round your answer to four decimal places.)

$p$ -value =  ✓

(e) Compute a 95% CI (in thousands) for the true difference in mean white blood cell count between the two groups. (Enter your answer using interval notation. Round your numerical values to two decimal places.)

✓

period? (You may need to use the Distribution Calculators page in SALI to check conditions.)

- paired  $t$  test
- two-sample  $t$  test for independent samples with equal variances
- two-sample  $t$  test for independent samples with unequal variances
- $F$  test for the equality of two variances

(b) Perform the test in part (a) using the raw scale, and report a  $p$ -value. (Use  $\alpha = 0.05$ .)

State the null and alternative hypotheses (in g/24 hr). (Enter != for  $\neq$  as needed.)

$$H_0: \mu_d = 0$$

$$H_1: \mu_d \neq 0$$

Find the test statistic. (Round your answer to two decimal places.)

-3.45

Use technology to find the  $p$ -value. (Round your answer to four decimal places.)

$p$ -value = 0.0072

State your conclusion.

- Fail to reject  $H_0$ . There is sufficient evidence to conclude that there is a significant change in mean urinary protein over the 8-week period.
- Fail to reject  $H_0$ . There is insufficient evidence to conclude that there is a significant change in mean urinary protein over the 8-week period.
- Reject  $H_0$ . There is sufficient evidence to conclude that there is a significant change in mean urinary protein over the 8-week period.
- Reject  $H_0$ . There is insufficient evidence to conclude that there is a significant change in mean urinary protein over the 8-week period.

Perform the test in (a) using the ln scale, and report a  $p$ -value. (Use  $\alpha = 0.05$ .)

State the null and alternative hypotheses (in g/24 hr). (Enter != for  $\neq$  as needed.)

$$H_0: \mu_d = 0$$

$$H_1: \mu_d \neq 0$$

Find the test statistic. (Round your answer to two decimal places.)

-3.58

Use technology to find the  $p$ -value. (Round your answer to four decimal places.)

$p$ -value = 0.0059

State your conclusion.

- Fail to reject  $H_0$ . There is insufficient evidence to conclude that there is a significant change in mean ln(urinary protein) over the 8-week period.
- Fail to reject  $H_0$ . There is sufficient evidence to conclude that there is a significant change in mean ln(urinary protein) over the 8-week period.
- Reject  $H_0$ . There is sufficient evidence to conclude that there is a significant change in mean ln(urinary protein) over the 8-week period.
- Reject  $H_0$ . There is insufficient evidence to conclude that there is a significant change in mean ln(urinary protein) over the 8-week period.