

Written Homework 6 Answers, due Thursday 7 August 2008

This assignment has both recommended and required problems. Please only submit the required problems on the 7th.

Recommended

Section 8-3: Page 414, Problem 6

You need to specify appropriate statistical hypotheses

$$z = -2.70$$

$$z \text{ critical} = -1.645$$

$$0.0035$$

There is sufficient evidence ...

No

Section 8-4: Page 423, Problem 10

You need to specify appropriate statistical hypotheses

$$z = -6.64$$

$$z \text{ critical} = -1.645$$

$$0.0001 \text{ (using software } 0.0000)$$

Reject the null

There is sufficient evidence ...

Section 8-5: Page 433, Problem 20

You need to specify appropriate statistical hypotheses

$$t = -1.756$$

$$t \text{ critical} = \pm 2.110$$

$$0.05 < p < 0.10 \text{ (using software } 0.0970)$$

Fail to reject the null

There is insufficient evidence ...

Section 9-2: Page 466, Problem 24

$$95\% \text{ CI: } -0.00199 < p_1 - p_2 < 0.00329$$

You add the interpretation

Section 9-3: Page 480, Problem 17

You need to specify appropriate statistical hypotheses

$$t = 0.132$$

$$t \text{ critical} = 1.729$$

$$p > 0.10 \text{ (using software } 0.4480)$$

Fail to reject the null

There is insufficient evidence ...

Required

Section 8-3: Page 417, Problem 24

State hypothesis (I can't list them here without giving you the solution).

Test statistic: $z = -5.46$

Critical value: $z = -2.33$

P-value: 0.0001

Conclude reject the null—you must put the conclusion in the context of the problem

Section 8-4: Page 425, Problem 18

State hypothesis (I can't list them here without giving you the solution).

Test statistic: $z = -1.12$

Critical value: $z = \pm 1.96$

P-value: 0.0.2628 (using software 0.2632)

Conclude fail to reject the null—you must put the conclusion in the context of the problem

Section 8-5: Page 433, Problem 18

State hypothesis (I can't list them here without giving you the solution).

Test statistic: $t = -0.601$

Critical value: $t = \pm 2.021$

P-value: > 0.20 (using software 0.5515)

Conclude fail to reject the null—you must put the conclusion in the context of the problem

Section 9-2: Page 466, Problem 20; Assume that alpha for the hypothesis test is 0.05.

State hypothesis (I can't list them here without giving you the solution).

Test statistic: $z = -12.39$

Critical value: $z = -1.645$

P-value: 0.0001 (using software 0.0000)

Conclude Reject the null—you must put the conclusion in the context of the problem

Section 9-3: Page 481, Problem 18

$-0.61 < \mu_1 - \mu_2 < 0.71$

There is insufficient evidence to support the claim—Why?