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Question 3

Approximately 13% of the world's population is left-handed, but is this proportion the same across men and women?

To answer this question, you decide to collect data from a random sample of adults from your neighborhood, with the following results:

| ID | Gender | Dominant Hand |
|----|--------|---------------|
| 1 | M | L |
| 2 | M | R |
| 3 | F | R |
| 4 | M | R |
| 5 | F | R |
| 6 | F | L |

Help

| | | |
|----|---|---|
| 7 | F | L |
| 8 | M | R |
| 9 | F | R |
| 10 | F | R |
| 11 | M | L |
| 12 | F | R |
| 13 | M | R |
| 14 | M | R |
| 15 | F | R |
| 16 | M | R |
| 17 | M | R |
| 18 | F | R |
| 19 | F | L |
| 20 | M | R |
| 21 | F | R |

3a. Which of these is the appropriate null hypothesis for this test?

- ☒ Gender and hand-dominance are independent. ✓
- ☐ Gender and hand-dominance are NOT independent

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Hide Answer

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(1 point possible)

3b. What would be the **degrees of freedom** and the **critical value** for this analysis, assuming $\alpha = 0.05$?

Degrees of Freedom

Answer: 1

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Critical Value (Round to 2 decimal places.)

Answer: 3.84

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(1 point possible)

3c. What are the **expected** counts for **Males**? (*Round to 2 decimal places.*)

Left-handed Males

Answer: 2.38

Hide Answer

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Right-handed Males (*Round to 2 decimal places.*)

Answer: 7.62

Hide Answer

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(1 point possible)

3d. What are the **expected** counts for **Females**? (Round to 2 decimal places.)

Left-handed Females

Answer: 2.62

Hide Answer

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(1 point possible)

Right-handed Females (Round to 2 decimal places.)

Answer: 8.38

[Hide Answer](#)*You have used 0 of 1 submissions*

(1 point possible)

3e. Are all relevant conditions met to run this analysis?

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☐ Yes☒ No[Hide Answer](#)*You have used 0 of 1 submissions*

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