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MATH 263H

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Assignment #7

#7.1.14

1. Observational study, data not paired.
2. Experiment, data will be paired.
3. Experiment, data will be paired.

#7.1.16 (part A only)

1. Randomly assign subjects either their dominant or nondominant hand first, then they will use their other hand second. Repeat for multiple trials.

#7.2.16

1. Explanatory: How the ball is rebounded, categorical. Response: Number of shots made, quantitative.
2. Observational study.
3. Number of shots made.
4. No.
5. t = 1.6582, p-value = 0.1013.

#7.3.10 (skip E)

1. The child is paired by itself to observe two different approaches.
2. Approach where the helper or hinderer is watched.
3. Time spent watching the approach.
4. Null: Average time watching the helper is the same as the hinderer. Alternated: Average time watching helper is different from hinderer. Hinderer is longer?

#7.3.28 (skip G)

1. μ: The average difference in RMET scores when on oxytocin compared to the placebo.
2. Null, μ0: No difference in scores. Alternate, μa: Scores when on oxytocin are higher than placebo.
3. Randomness: Assumed, random order assignment. Independence: 10(30) < population. Stated that the RMET score differences were not strongly skewed, sample size is equal to 30.
4. t = 2.179, p-value = 0.01879.
5. Probability of obtaining a difference of 3 or large is 1.879% if the long run average difference is 0.
6. 95% confidence interval (0.18452, 5.8155)