

# ECE 341 - Homework #12

t-Test with a Single Population. Summer 2023

## 6-Card Poker

The computed odds of being dealt 2-pair in 6-card poker are 12.44% (homework set #2).

1) The result of four Monte-Carlo simulations with 100,000 poker hands are:

12458, 12498, 12573, 12416

From these results, determine the 90% confidence interval for the odds of getting 2-pair.

2) The result of twenty Monte-Carlo simulations with 100,000 poker hands are:

12591, 12323, 12404, 12622, 12309, 12317, 12544, 12503, 12410, 12483  
12385, 12303, 12458, 12418, 12415, 12417, 12309, 12378, 12444, 12463

From these results, determine the 90% confidence interval for the odds of getting 2-pair.

## 6-Card Draw

The computed odds of getting four-of-a-kind in 6-card poker with a draw step are 0.0068287 (homework set #2)

3) The result of four Monte-Carlo simulations with 100,000 poker hands are:

718, 742, 778, 730

From these results, determine the 90% confidence interval for the odds of getting four of a kind.

4) The result of twenty Monte-Carlo simulations with 100,000 poker hands are:

791, 763, 789, 741, 734, 748, 761, 765, 714, 754  
770, 768, 770, 761, 751, 790, 754, 772, 719, 736

From these results, determine the 90% confidence interval for the odds of getting four of a kind.

## Reaction Time

5) Go to the Human Benchmark Dashboard and record your reaction time

<https://humanbenchmark.com/tests/reactiontime>

6) From your results, determine the 90% confidence interval for your reaction time.

7) From your results, determine the probability that

- Your next trial will be less than 200ms
- Your average reaction time is less than 200ms