

Group 1: Tennis

Olivia Beck, Emma Wilson, Ryan Volkert

December 12, 2019

The Game of Tennis

- ▶ Point: Smallest unit of measurement (Love-15-30-40-game)
- ▶ Game: A game is one when a player reaches 4 points with atleast a 2 point advantage
- ▶ Set: A set consists of 6 games and is won by the player who reases 6 games first
- ▶ Advantage Set: If a game score of 6-6 is reached and advantage set rules are used, a player can only win a set with a 2 game lead
- ▶ Matches: Best of 3 set (for women) or 5 sets (for men)
- ▶ Tie-break game: If a game score of 6-6 is reached and tie-break set rules are used. In a tie-break game, a player/team must reach 7 points with a two point advantage to win

Values

Things we need to know:

- ▶ Empirical probability of winning a rally on serve
- ▶ Empirical Probability of winning a game on serve

Values

Things we need to know:

- ▶ Empirical probability of winning a rally on serve
- ▶ Empirical Probability of winning a game on serve

Things we need to calculate:

- ▶ Theoretical probability of winning a game on serve
- ▶ Theoretical probability of winning a set
- ▶ Theoretical probability of winning a match
- ▶ Theoretical probability of winning the tie-breaker

Slide with R Output

```
summary(cars)
```

##	speed	dist
##	Min. : 4.0	Min. : 2.00
##	1st Qu.:12.0	1st Qu.: 26.00
##	Median :15.0	Median : 36.00
##	Mean :15.4	Mean : 42.98
##	3rd Qu.:19.0	3rd Qu.: 56.00
##	Max. :25.0	Max. :120.00

Slide with Plot

