

The background of the image is a dramatic, cloudy sky. A bright sun is visible through the clouds, creating a lens flare effect with rays of light. The clouds are dark and heavy, with some lighter, wispy clouds visible in the upper left.

PREDICTING LOTTERY NUMBERS

COLORADO LOTTERY BACKGROUND

Initial Drawing

- 6 numbers selected
- Number choices 1 - 40
- 1/21/1989 to 12/2/2020
- Wednesdays & Saturdays

Plus Drawing

- 6 numbers selected
- Number choices 1 - 40
- Began 3/23/2020
- Additional drawing conducted immediately after the initial drawing



COLORADO LOTTERY RULES

① Pick your numbers

- Choose six numbers from 1 to 40

② Buy your ticket

- Tickets cost \$2
- Each ticket will include a variable multiplier
 - 2X, 3X, 4X, 5X
- Play "Plus" for an extra \$1 and get a second draw

③ Play Multiple Drawings

- Buy up to 13 weeks (26 drawings) in advance

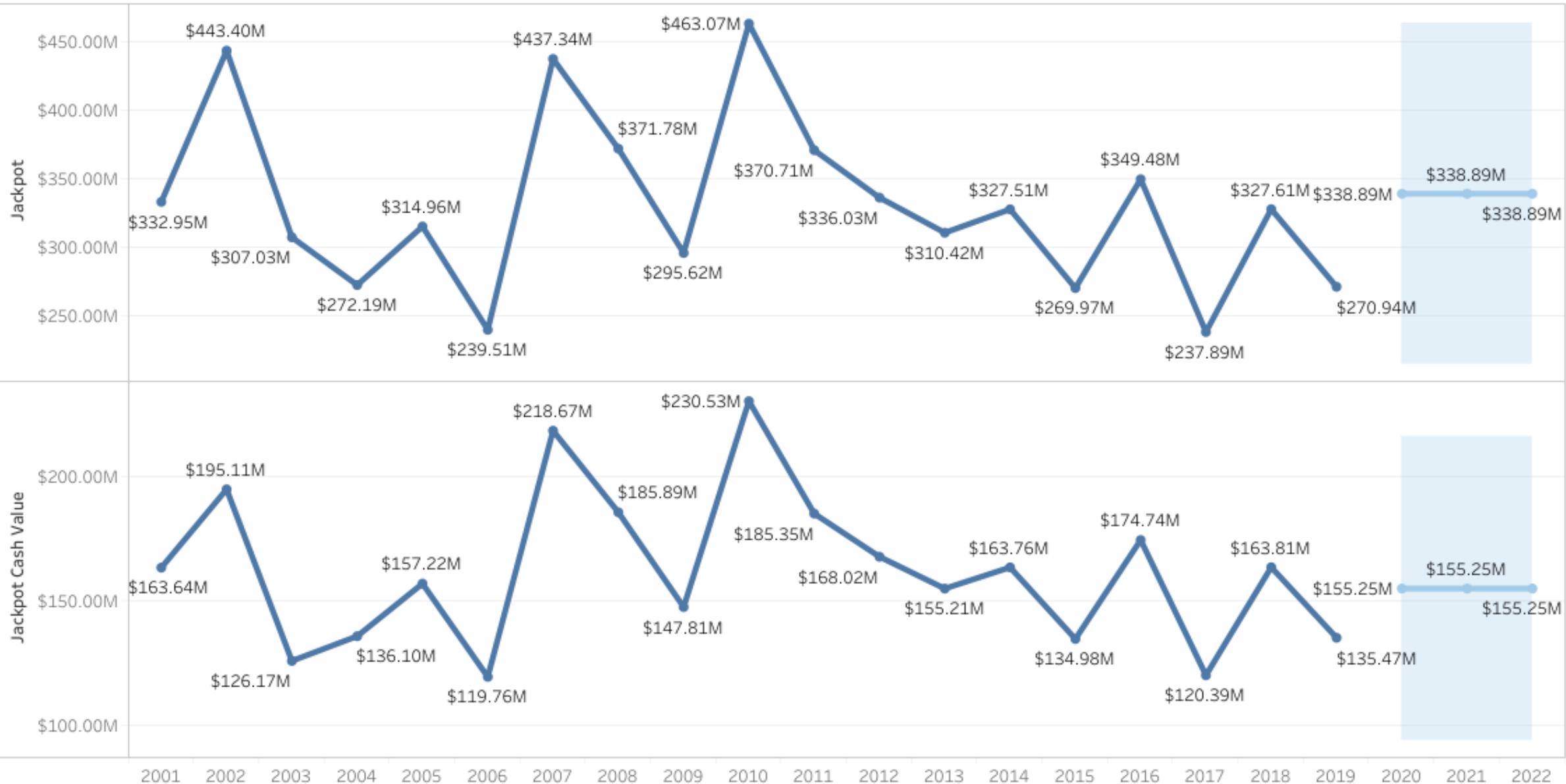
④ Check Your Winnings to see if you won!



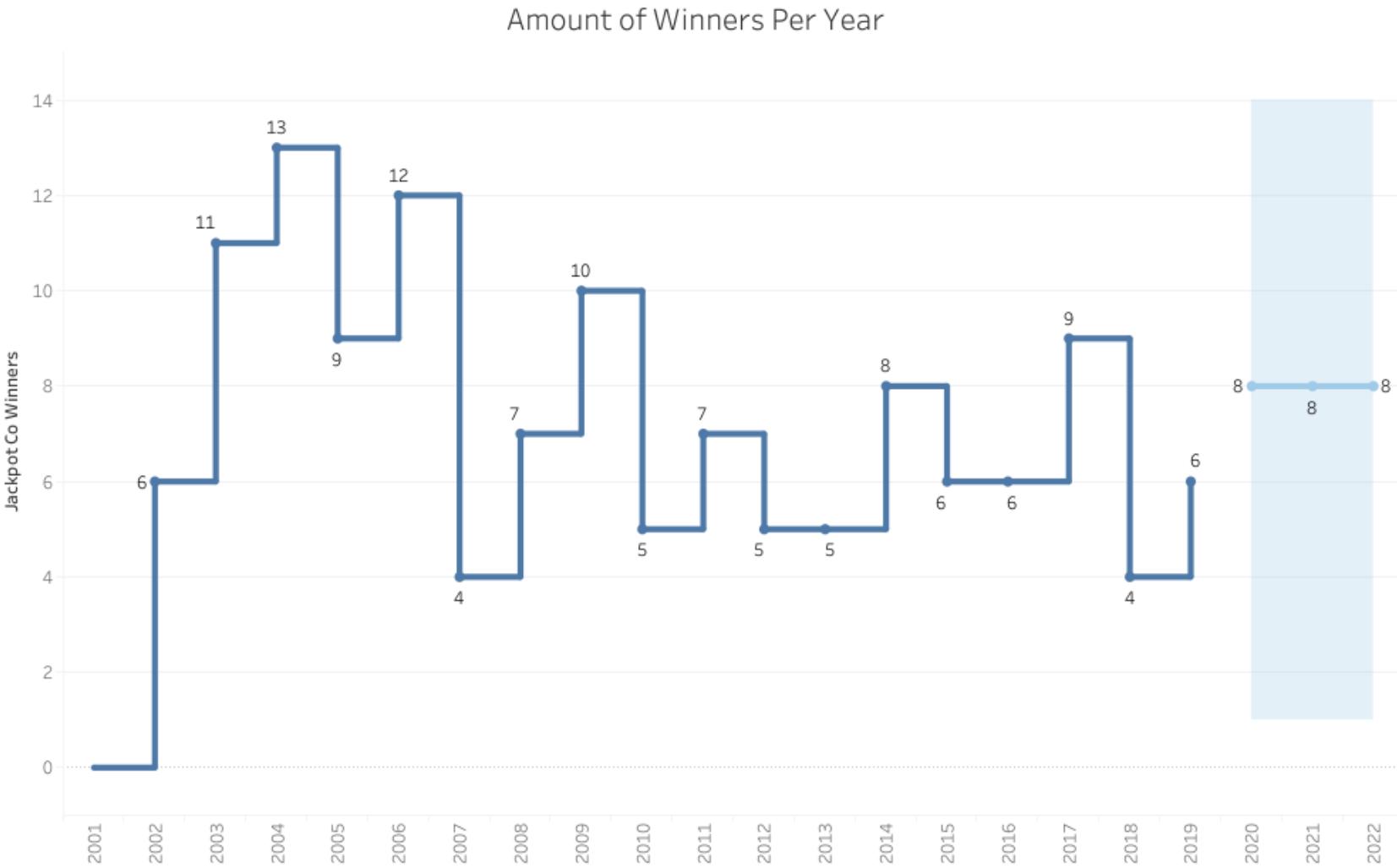


MATCH	Base	2X	3X	4X	5X
6	\$1 million + 25% of net sales for the drawing until it's won!				
5	\$250	\$500	\$750	\$1000	\$1250
4	\$25	\$50	\$75	\$100	\$125
3	\$3	\$6	\$9	\$12	\$15

Jackpot Value



WE COULD HAVE 8 WINNERS
IN 2021!



OUR GOAL

W | N

OUR PROBLEM

The following events have a higher chance of happening than you winning the lottery



- **Die from Hot Tap Water**
- **Write a NYT Best Seller**



- **Be Crushed by a Meteorite**
- **Get Attacked by a Shark**

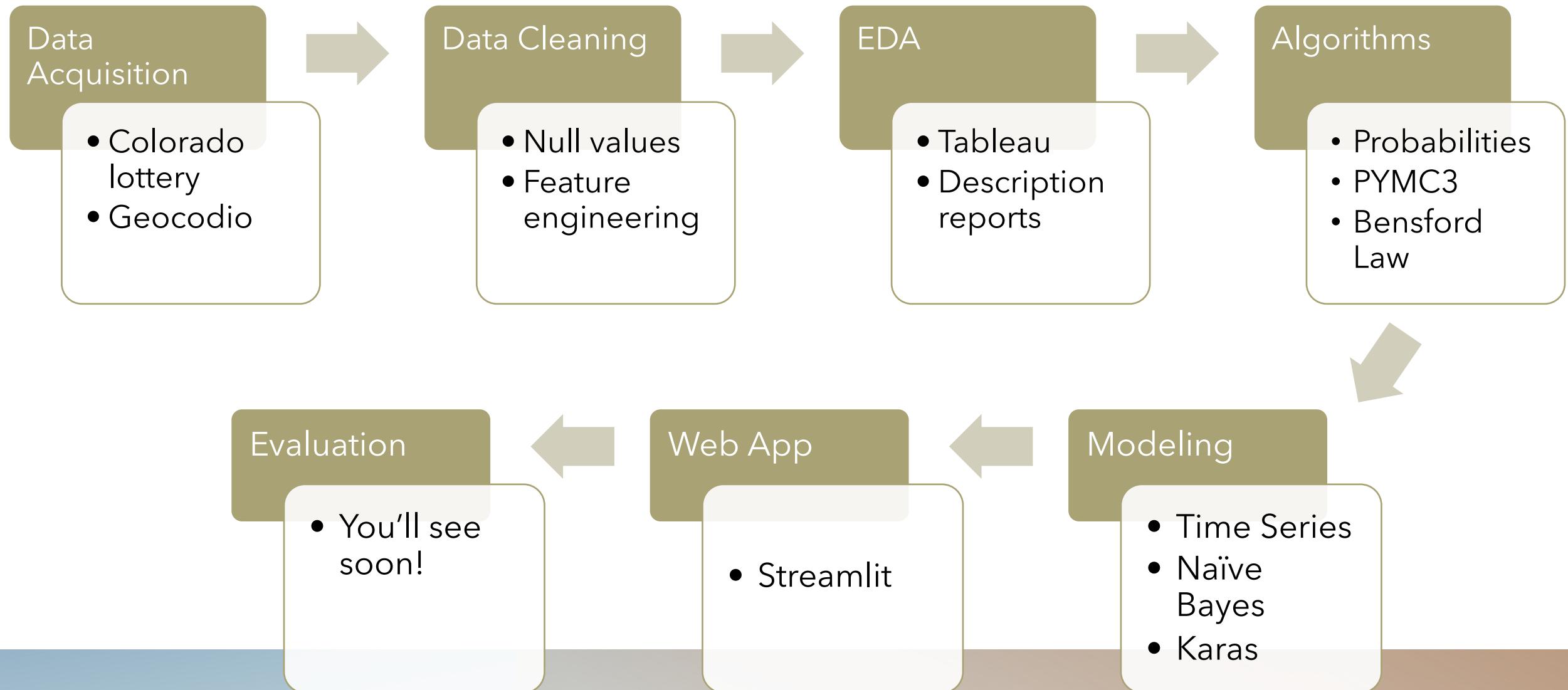


- **Become a U.S. President**
- **Survive a plane crash**



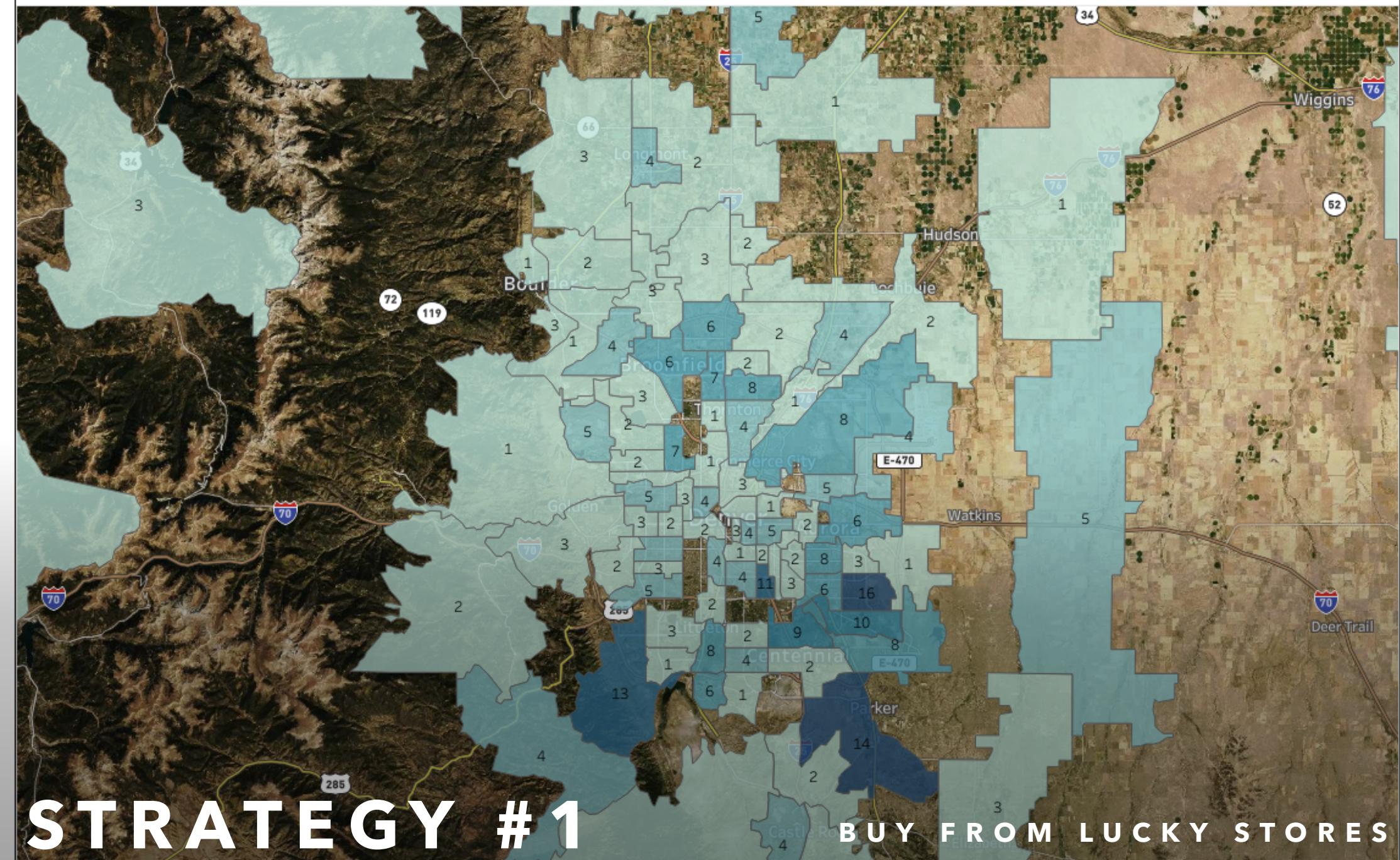
- **Have Identical Quadruplets**
- **Go to the E.R. With a Pogo Stick-Related Injury**

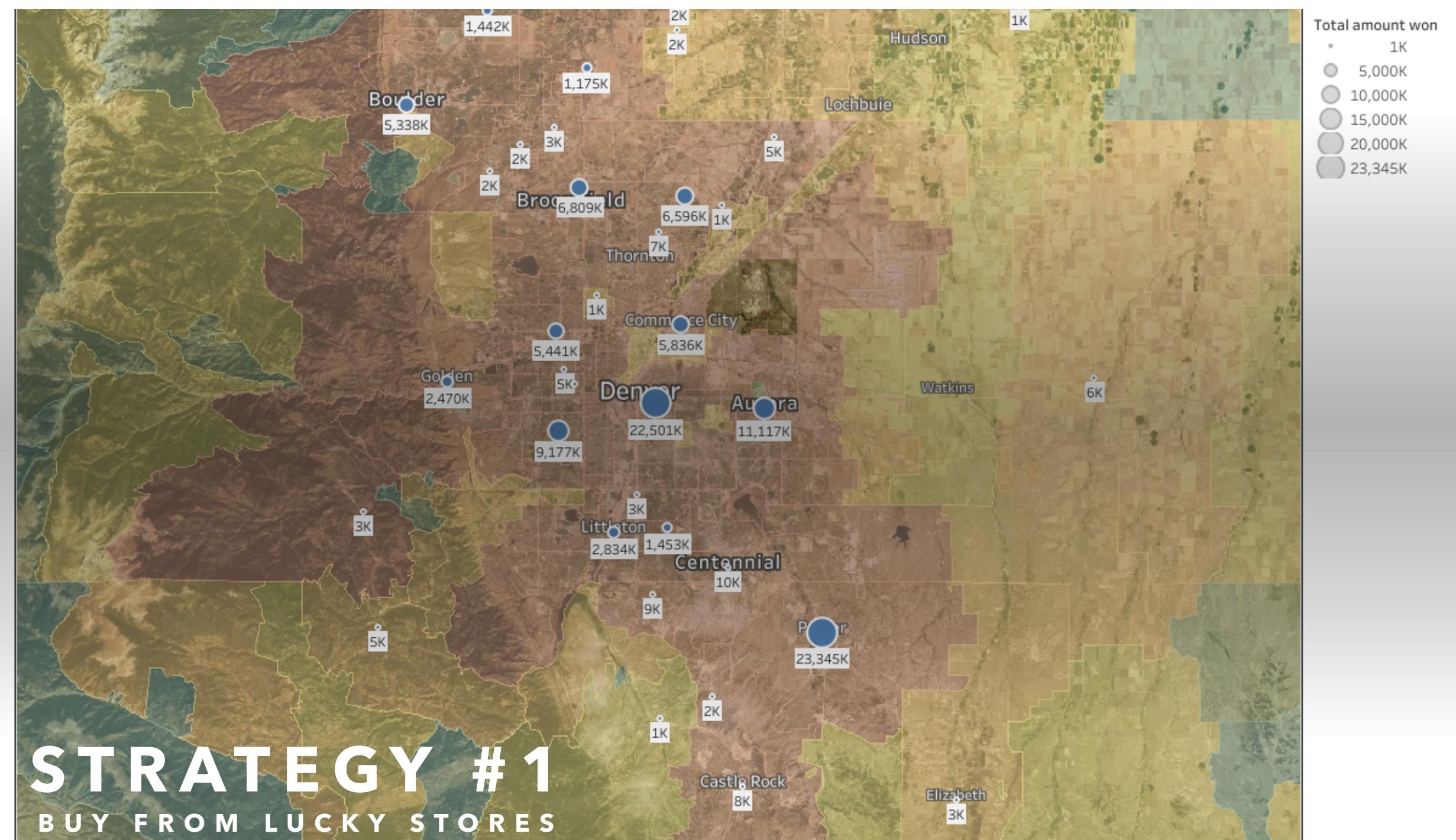
METHODOLOGY



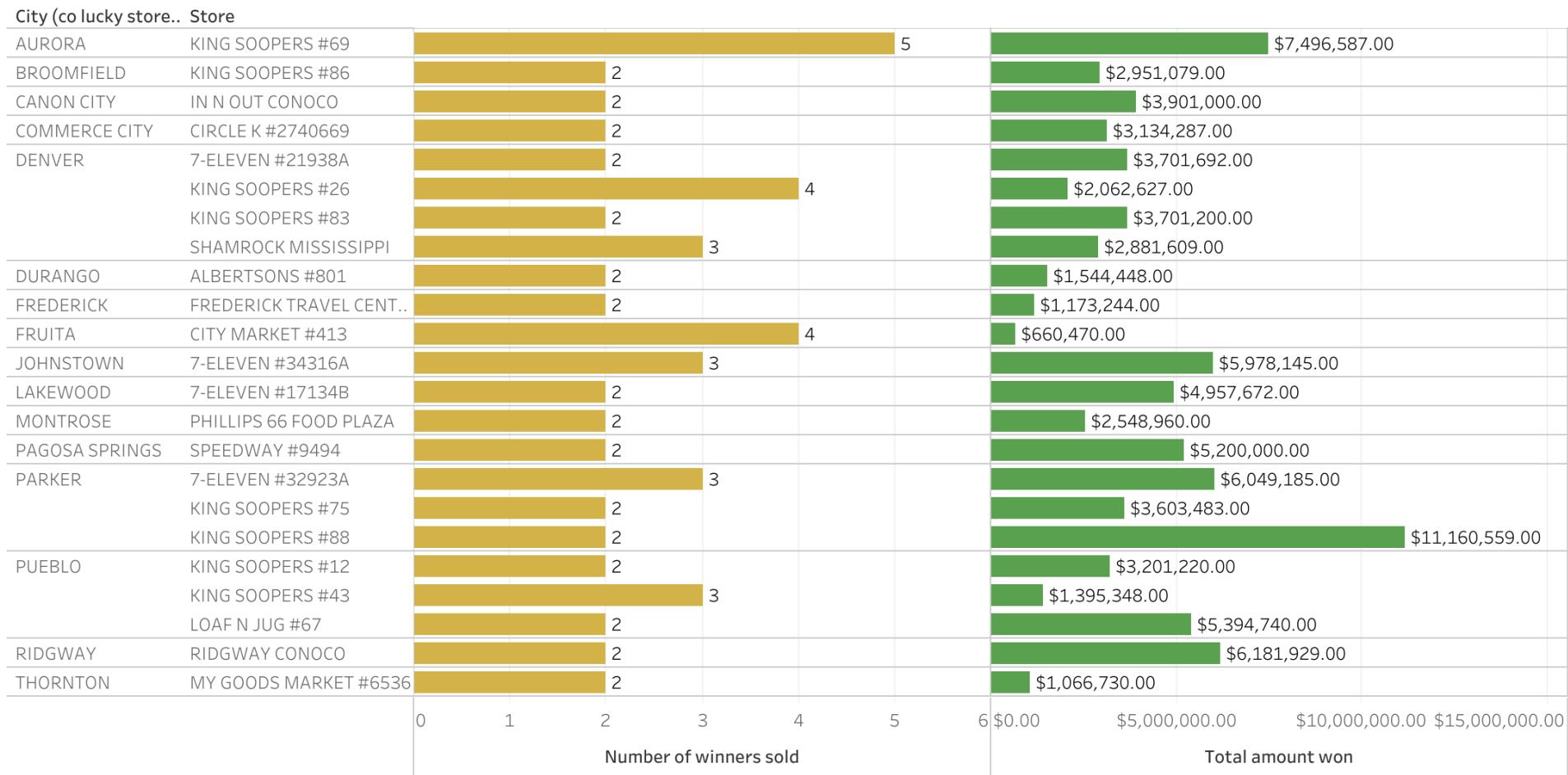
Winners per Zipcode

Number of winners sold
1 16





Lucky Locations

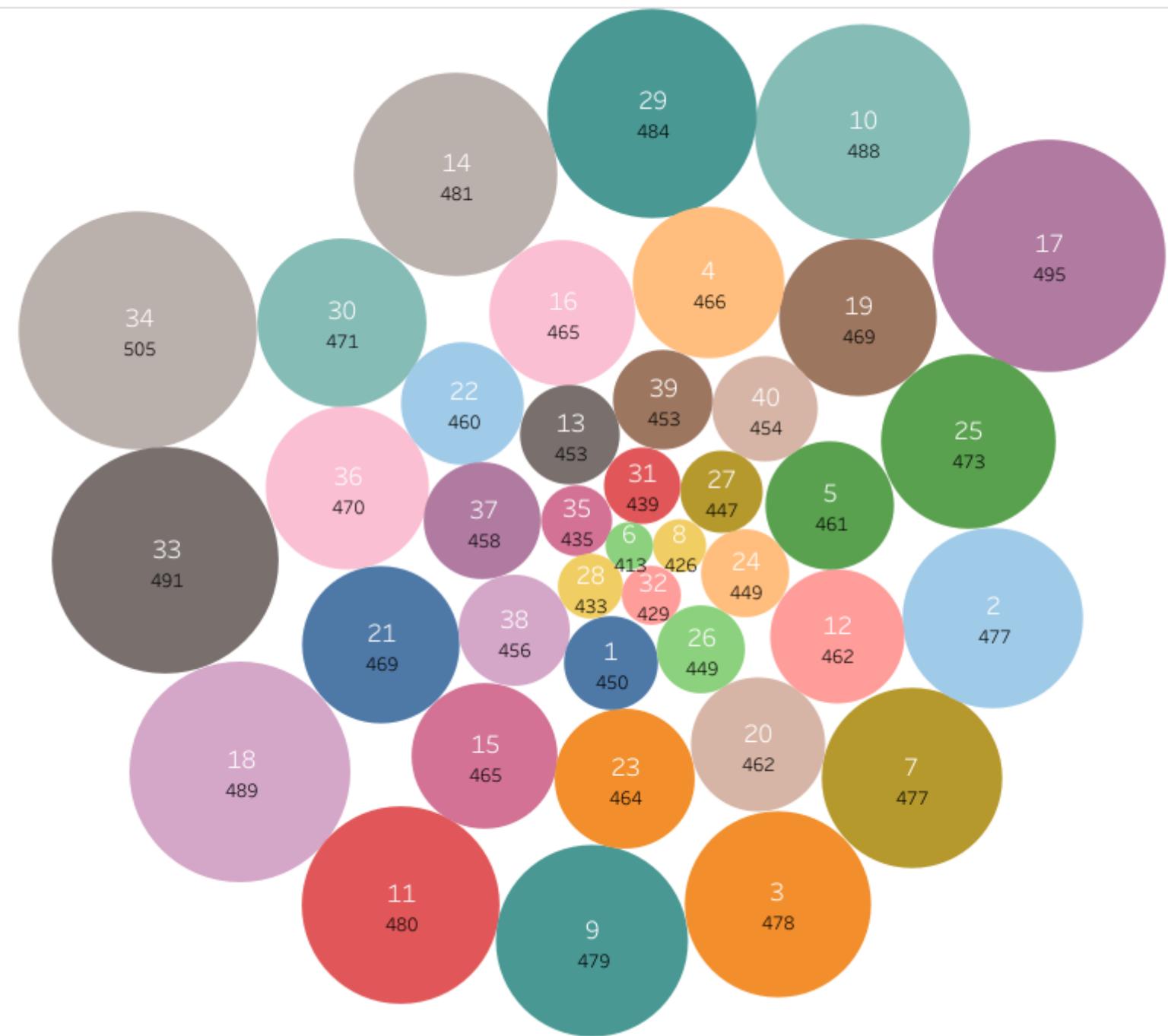


Sum of Number of winners sold and sum of Total amount won for each Store broken down by City (co lucky stores.csv). The view is filtered on sum of Number of winners sold and sum of Total amount won. The sum of Number of winners sold filter ranges from 2 to 5. The sum of Total amount won filter ranges from \$10,000.00 to \$11,160,559.00.

STRATEGY #1

BUY FROM LUCKY STORES

Numbers Most Drawn

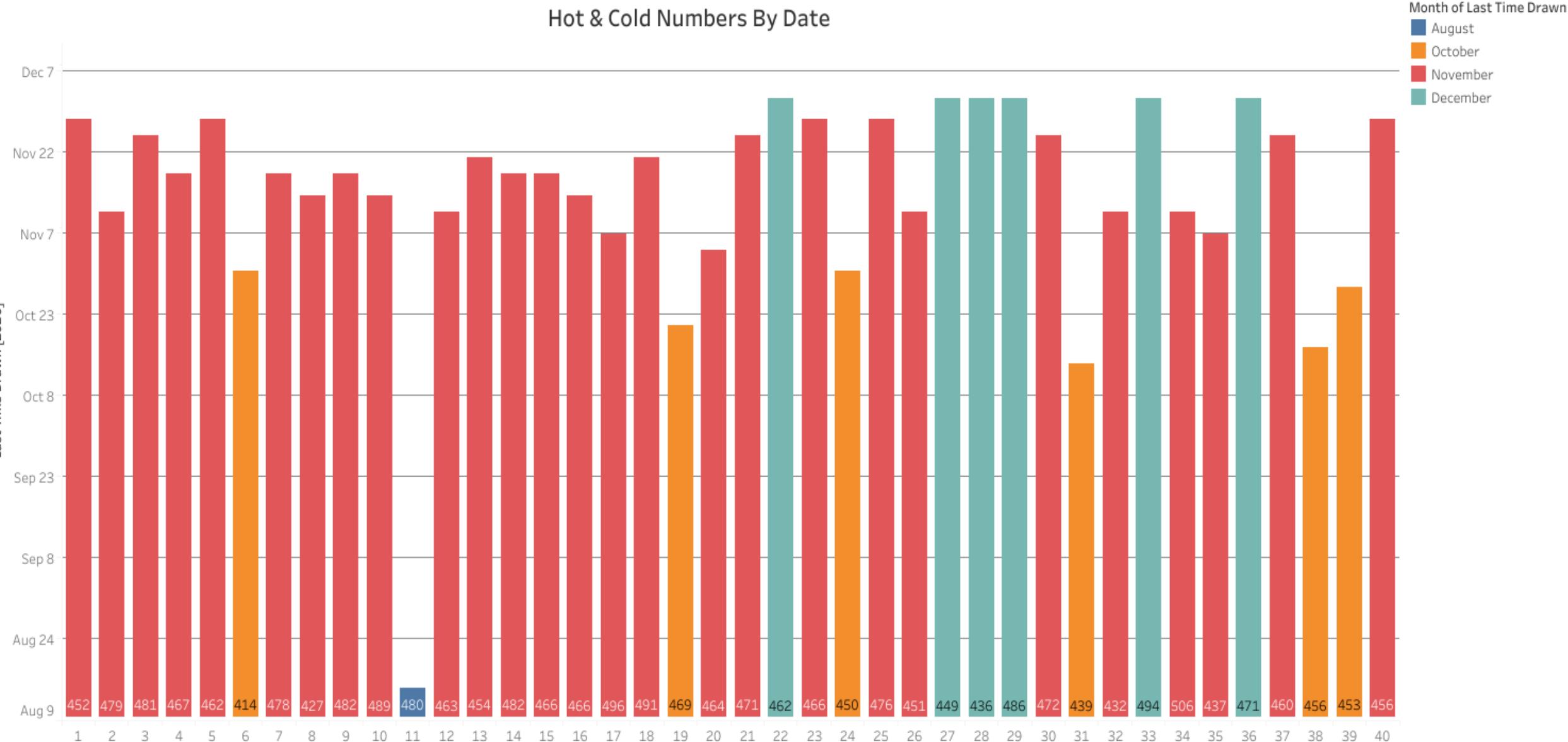


HOT AND COLD
NUMBERS

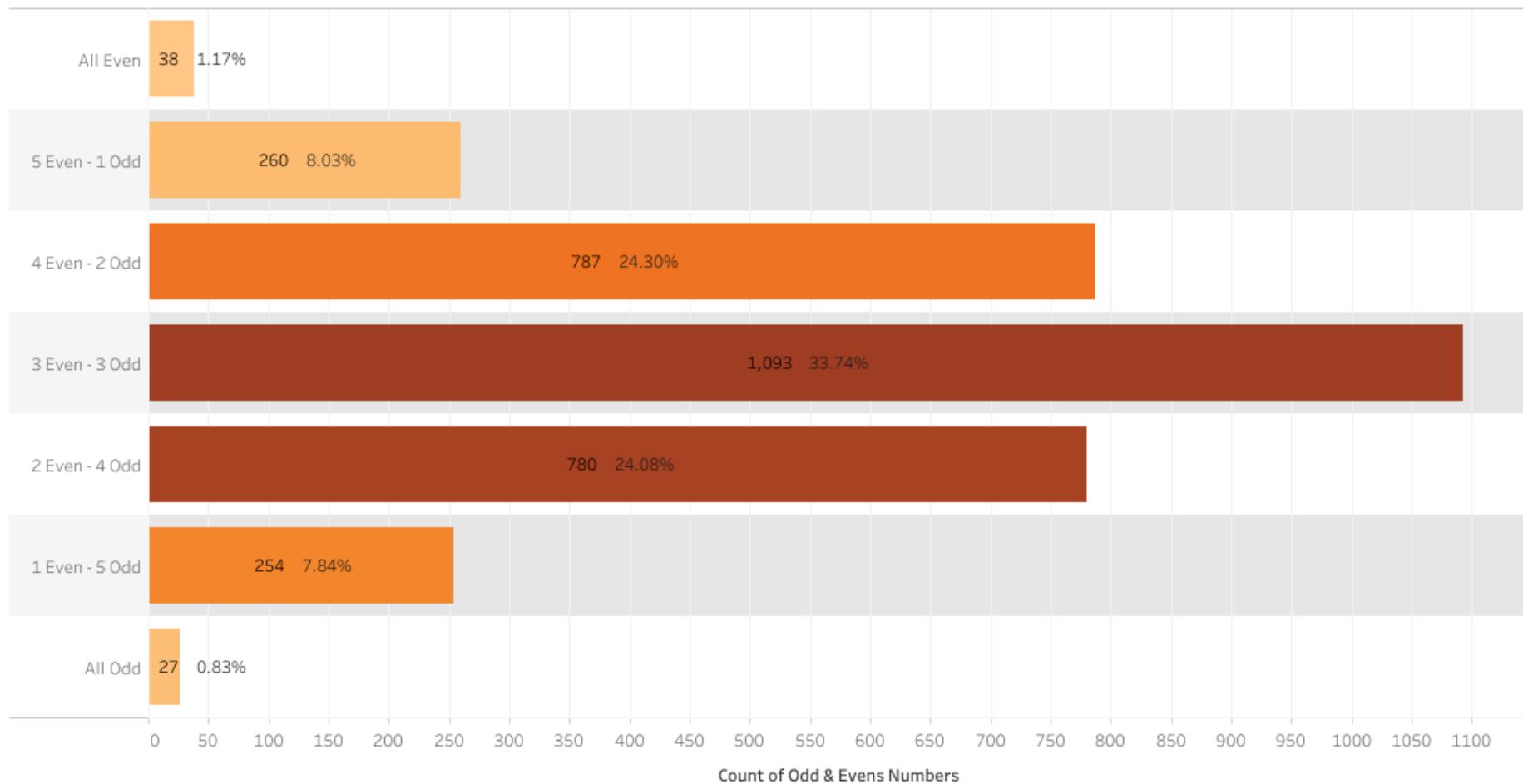
STRATEGY # 2

STRATEGY #2

HOT AND COLD NUMBERS



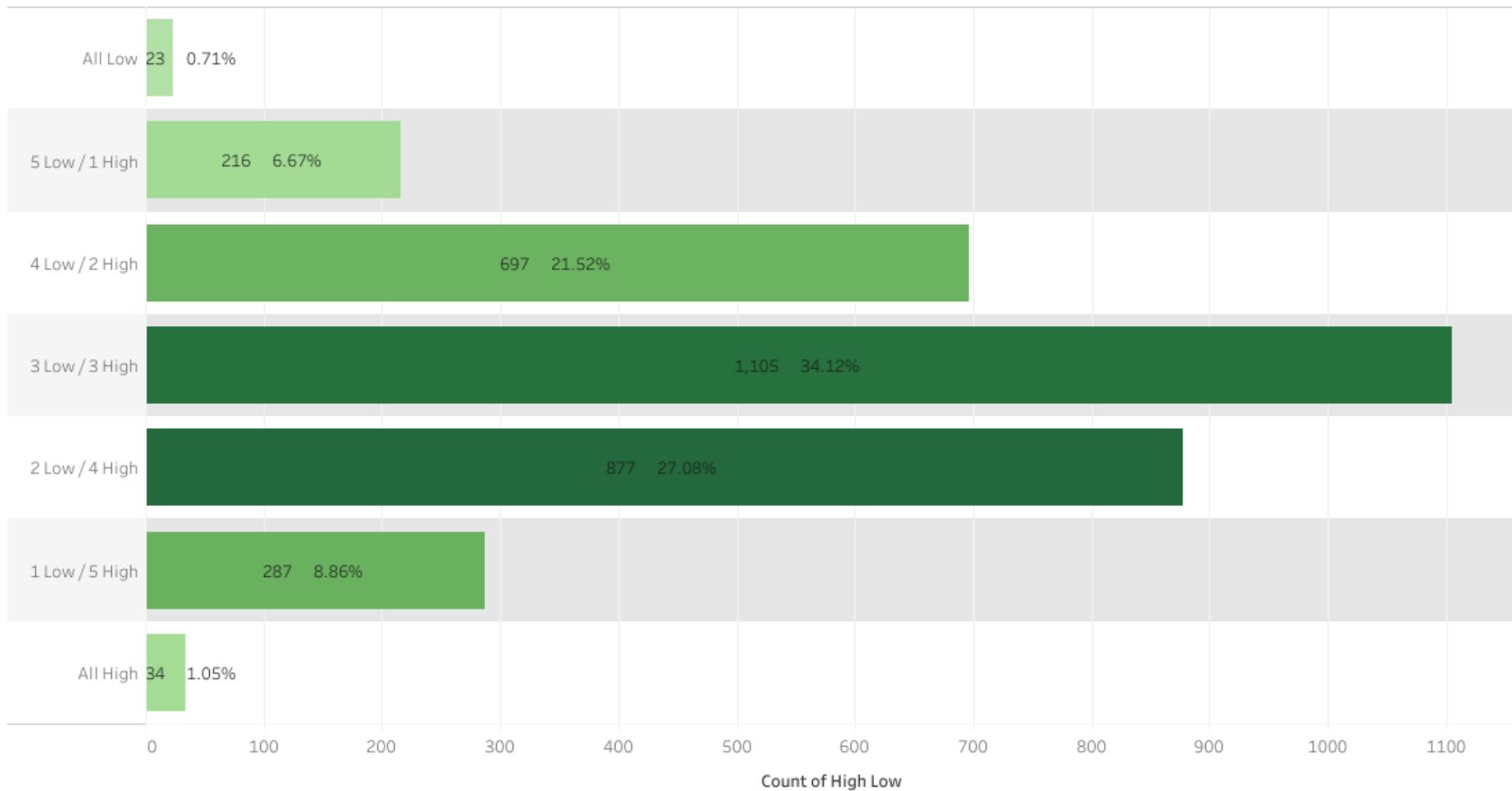
Lottery Numbers Odd vs Even



STRATEGY #3

ODDS VS EVENS

Lottery Numbers High vs Low

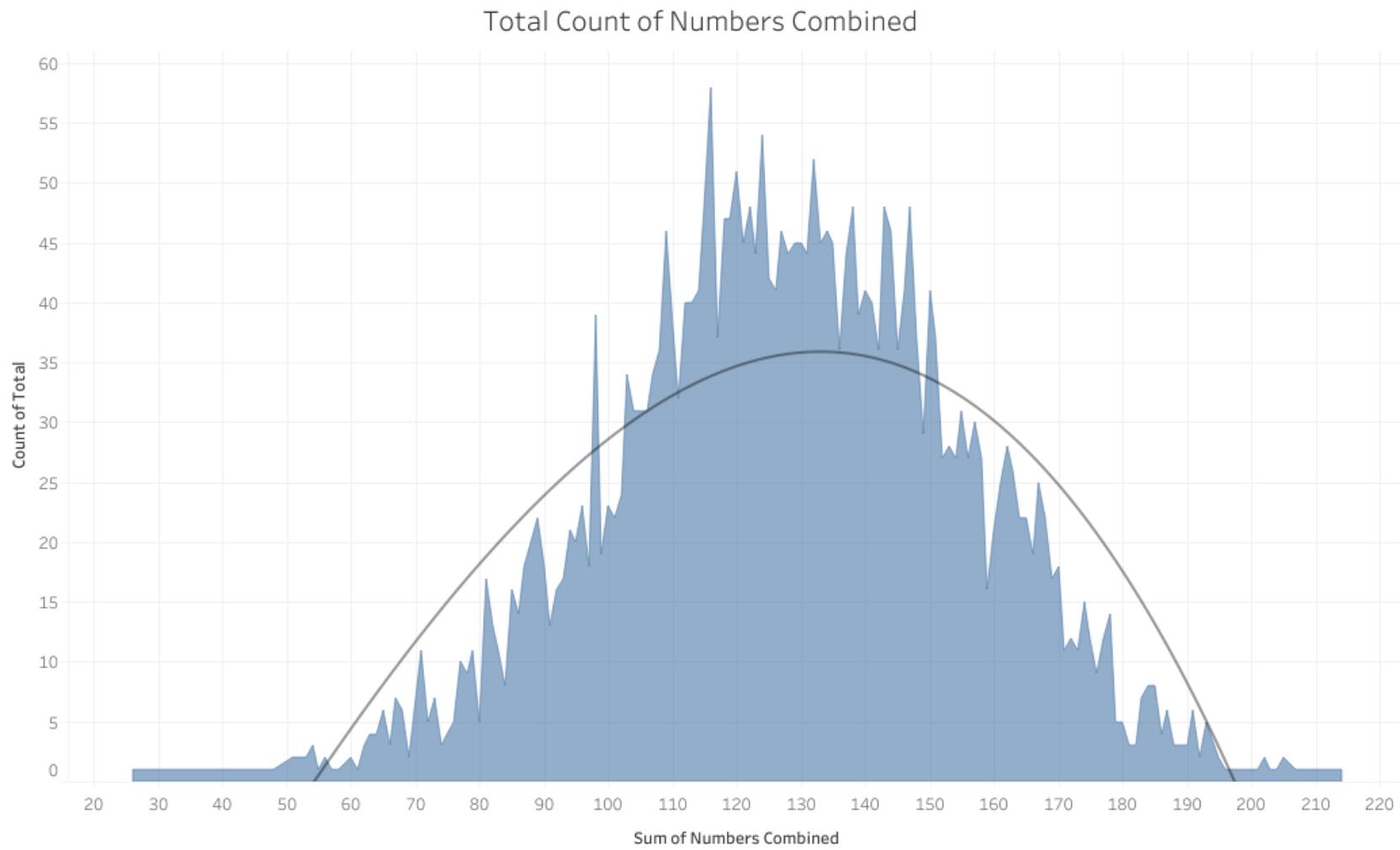


STRATEGY #4

HIGH VS LOW

STRATEGY # 5

ALL YOUR NUMBERS
SHOULD TOTAL ...



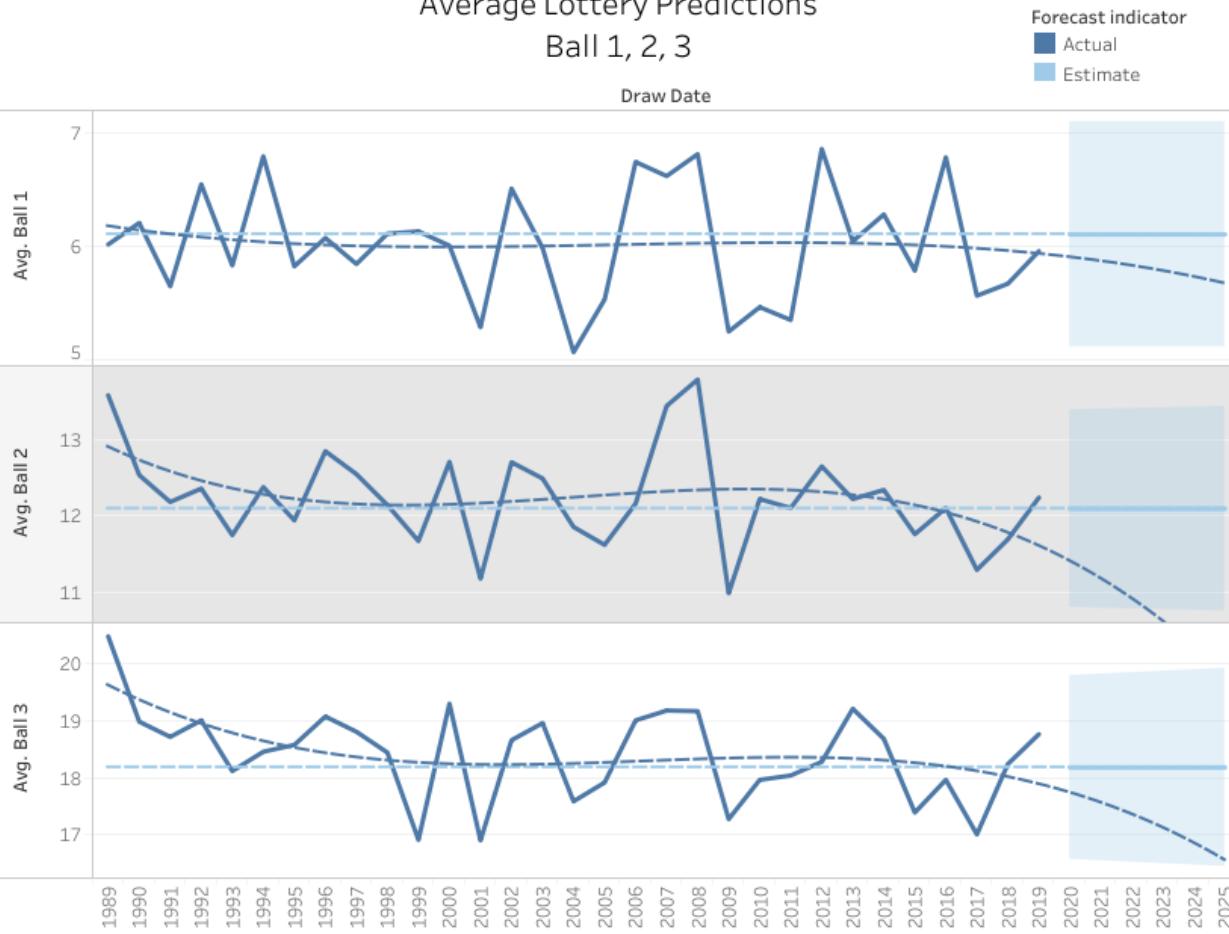
STRATEGY #6

NEVER PLAY NUMBERS THAT HAVE BEEN PREVIOUSLY DRAWN

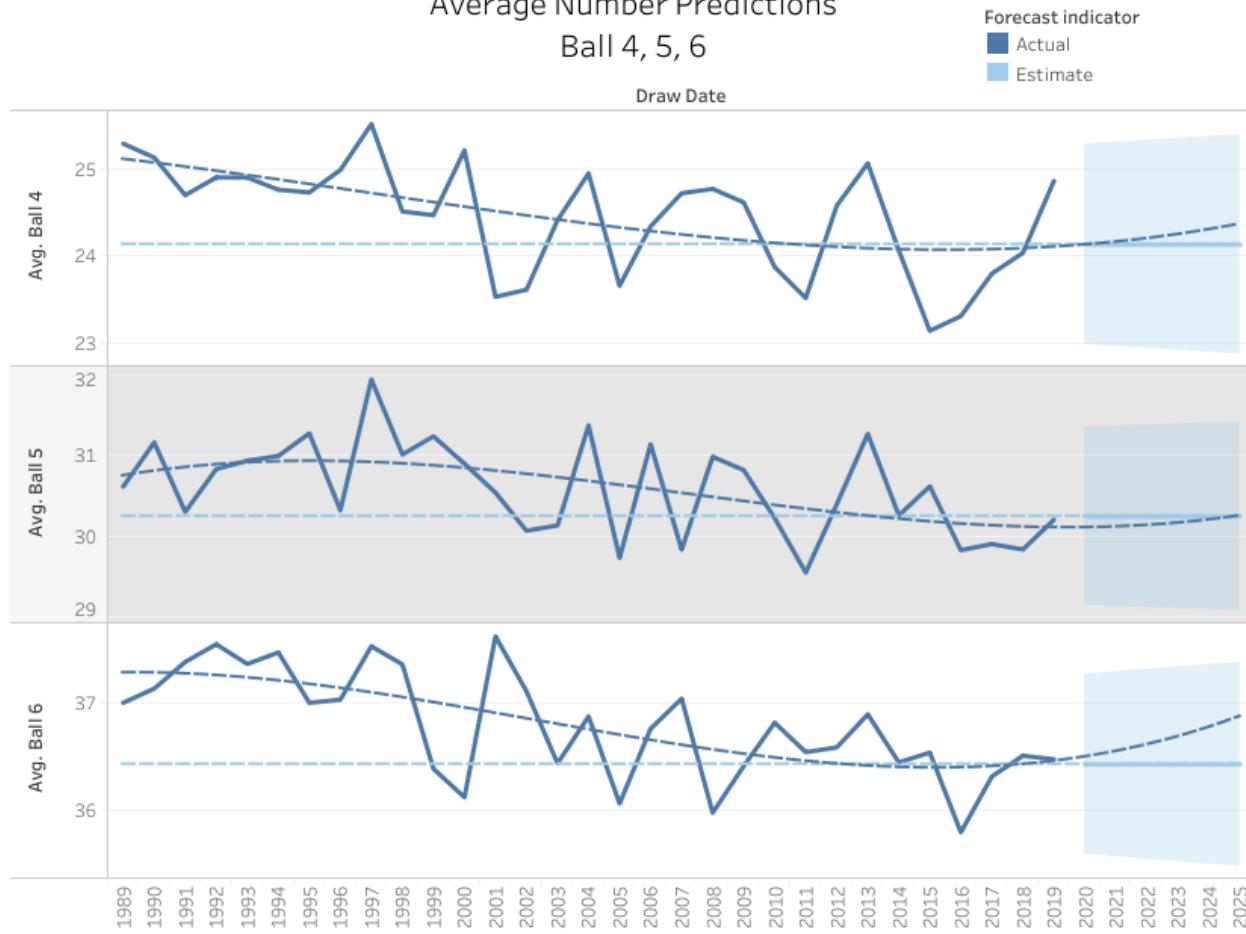
- Odds of you selecting all lottery number's correctly with a single ticket are 1 in 3835143!
- The probability of you winning the jackpot is 0.00000026074647020985%
- When you do not select past drawn numbers, you are 0.00000002198938938% more likely to win
- (but actually this isn't true because each game is totally random and independent)

TIME SERIES PREDICTIONS

Average Lottery Predictions
Ball 1, 2, 3



Average Number Predictions
Ball 4, 5, 6

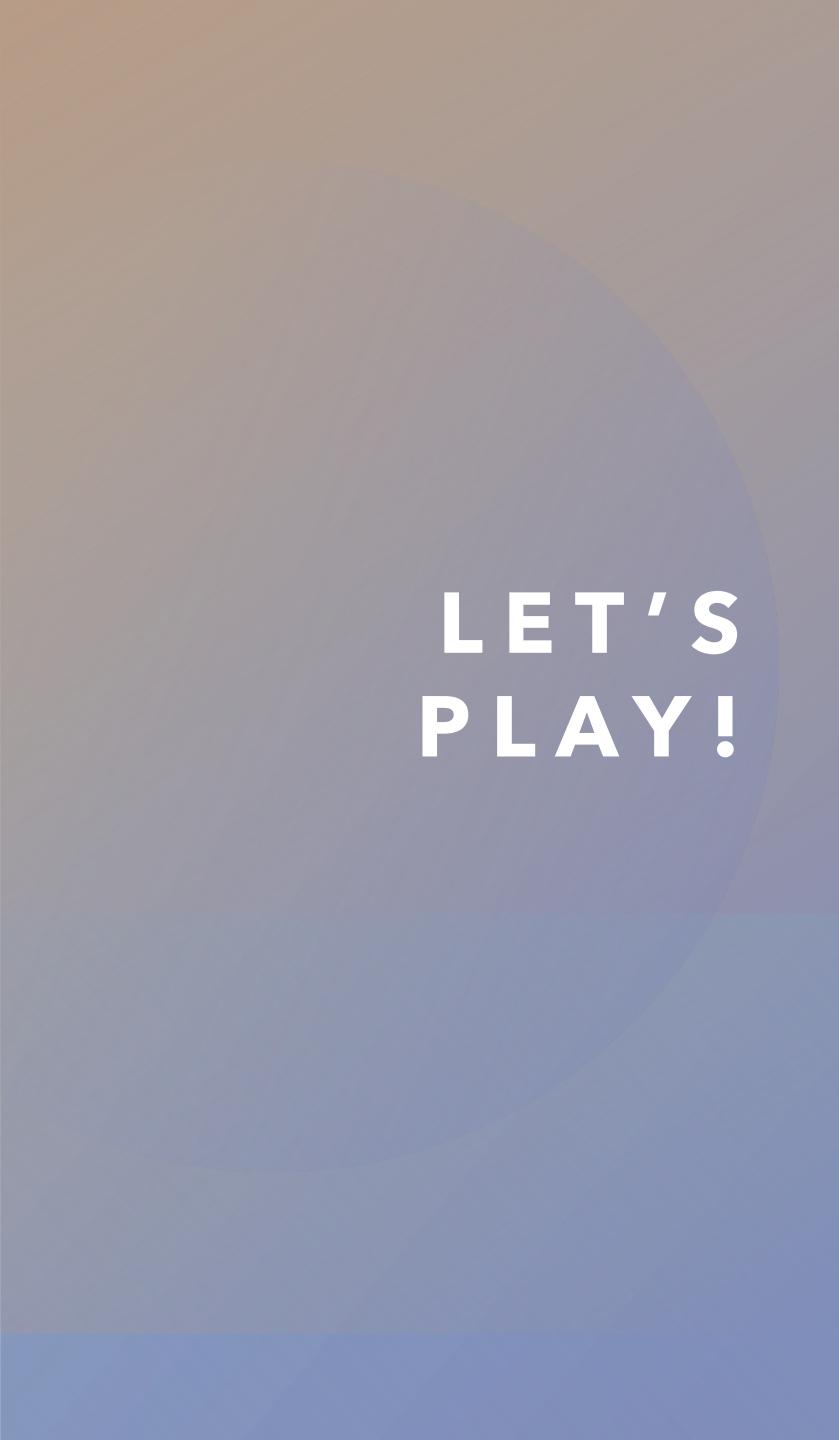


KERAS PREDICTIONS

- 7. 13. 20. 26. 30. 35.
- 7. 13. 18. 25. 31. 36.
- 8. 13. 19. 24. 30. 34.

Actual drawing : 9-12-17-22-34-40





LET'S
PLAY!

🔮 Lottery Crystal Ball 🔮

Pick 6 numbers from 1 to 40

Do you know the lottery numbers you want to play?

- Yes, I have my own numbers.
- No, predict my numbers for me.

CONCLUSION

- Every lottery ticket purchased has an equal probability of winning.
Each drawing is independent of the next therefore there is no relation between historical numbers and future numbers
- Because of this, my goal of predicting the exact numbers from one-time events, coming out of what is essentially a fully random process, is impossible to achieve.
- We can only predict using statistical methods and modeling when the data has some repeating patterns, correlation or some inherent order.
- On the other hand, we do now have a better idea of likely combinations, so maybe we will end up in the ER from a pogo stick related injury...

