Lotto Logic

CRACKING THE CODE OR CHASING A DREAM

AT A GLANCE

- Let's take a deeper look into 3 popular lotteries: Mega Millions, Power Ball and Pick 10
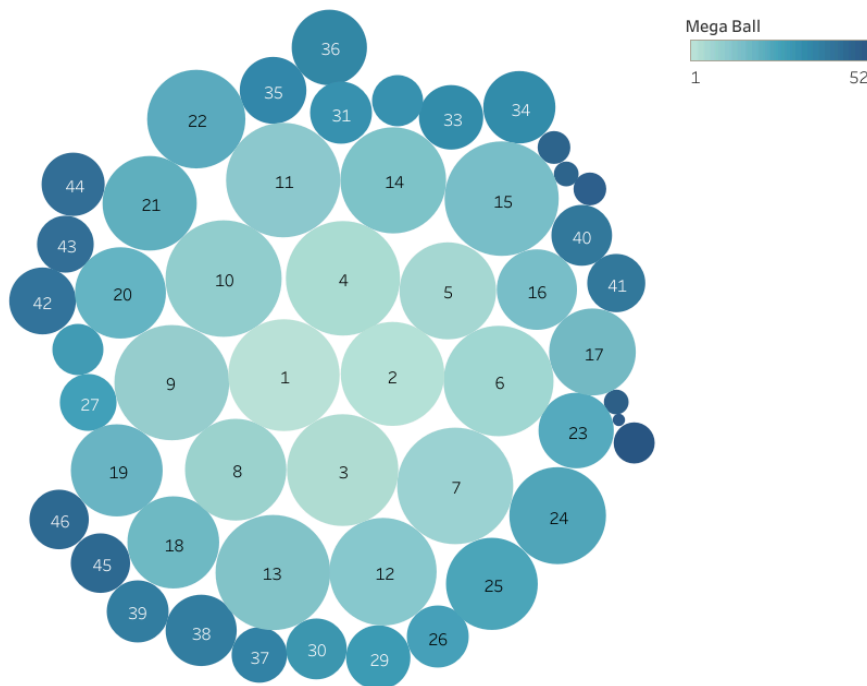- Are these results random? Which one should you choose?

Mega Millions

Chasing the Billion Dollar Dream

The Mega Millions is a popular lottery game that offers giant jackpots, often with numbers reaching the billions. To play a player will select 5 numbers that range from 1-70 as well as a Mega Ball that if matched will help earn the top dollars. This lottery is a high risk and high reward that keeps dreamers returning again and again.
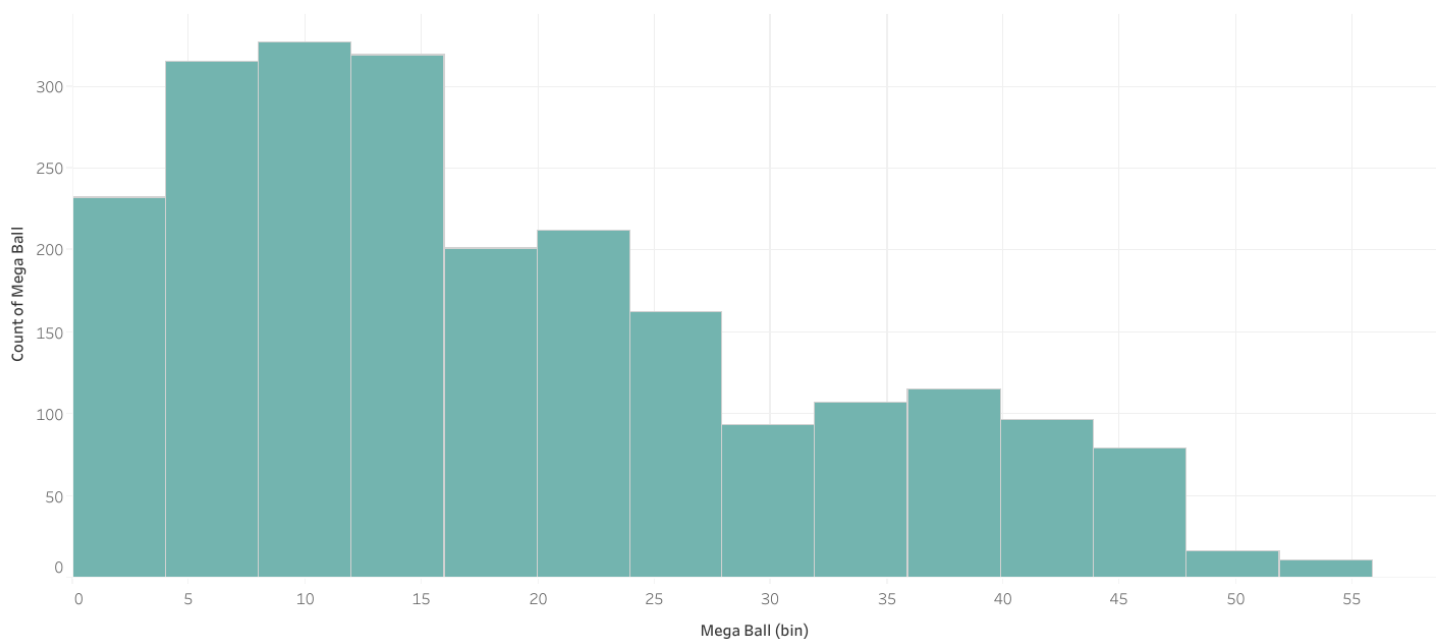
Visualizing the Mega Millions

This lottery has a unique characteristic of the Mega Ball, this number can be the key difference between small earnings and a huge success. I wanted to take a closer look of the trends around this important number and here is what I found:

Mega Millions Common Mega Balls

By analyzing the count of each time a number of times each number won I found that it is much more common for a smaller number to be chosen rather than one on the larger side. This can bee seen even more clearly in the visualization below.
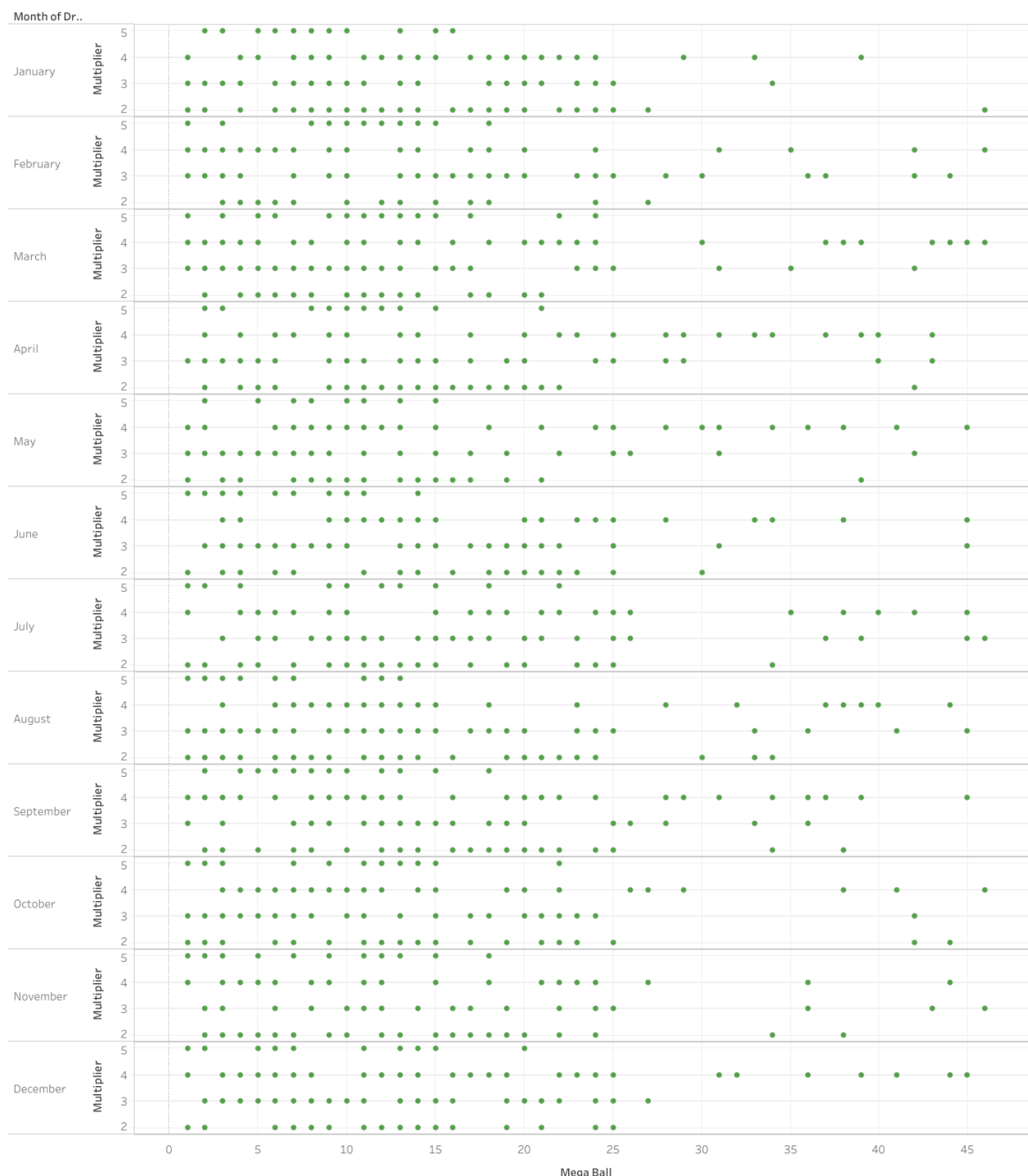
Mega Millions Mega Ball Distribution

Here you can clearly see that the distribution is highly skewed to between 4 and 16 before dropping off slightly from 16-28 and significantly dropping off after those numbers. This is a great learning! Now if you are considering playing the Mega Millions keep this in mind and for the highest likely success try choosing a number between 4-16!

Of course there are many factors to consider while playing the mega millions and for those who are trying to go for the most amount of money this next factor could be essential for you. Now lets take a closer look at the Multiplier.
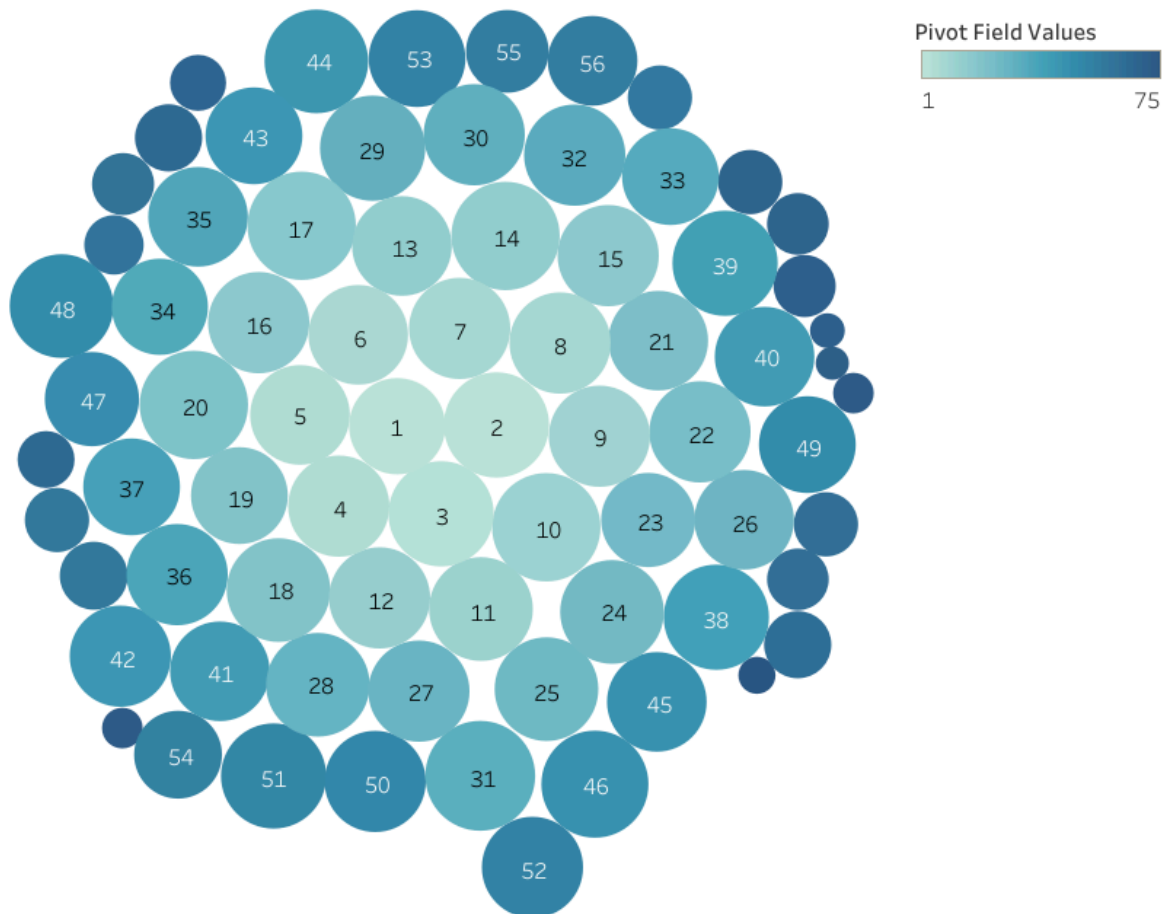
Mega Millions Month Analysis of Multiplier and Mega Ball

Broken down by month I took a closer look at the winning numbers by multiplier to see if I could locate any further findings. Across all months I found similar trends, overall there was a large concentration of chosen numbers on the lower end of the range. I found that with a multiplier of 4 the chosen Mega Ball has been more spread out across the range, making it very difficult to choose the correct number. Interestingly the multiplier that had the smallest chosen Mega Ball differences was under the multiplier of 5. This is an important finding to keep in mind when you decide to play the Mega Millions, my best advice if you are looking to play try to avoid the multiplier of 4 to give yourself the best chance of success.
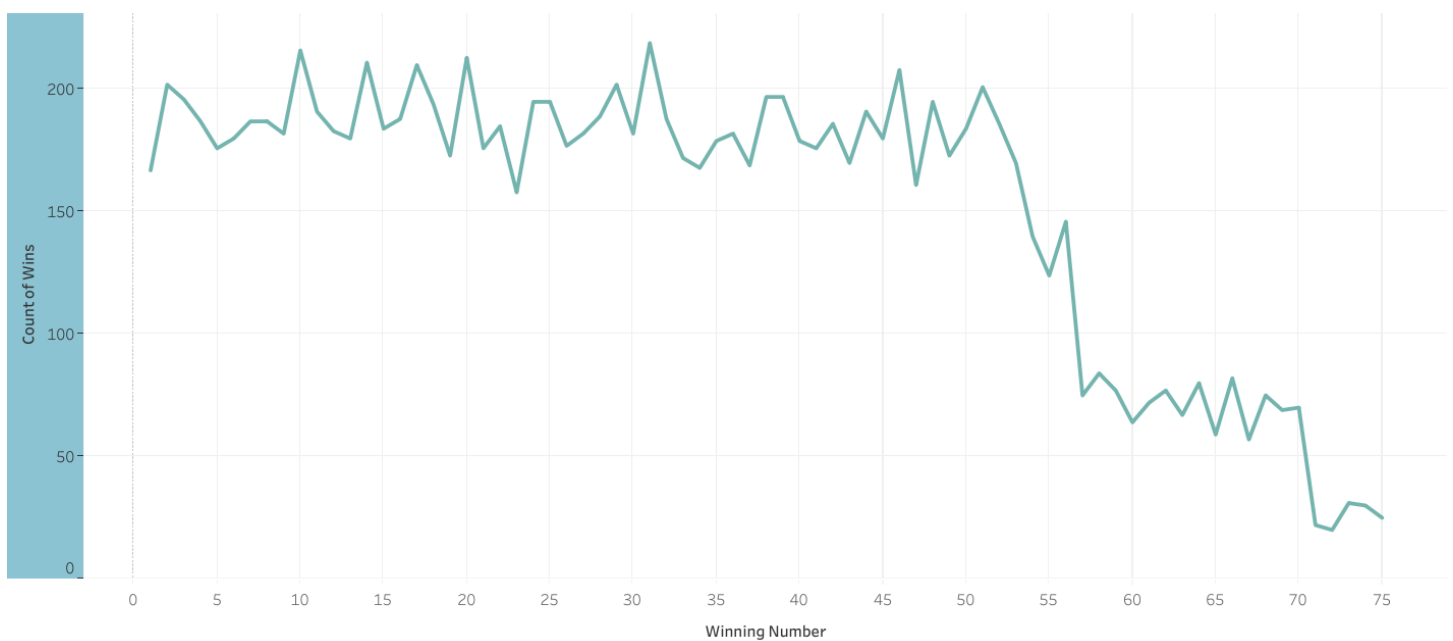
Finally now that we have taken a look at the unique pieces of this lottery it is also essential that we take a look into the trends of the winning numbers as these are going to be the difference between success and failure.

Mega Millions Winning Numbers

At a glance the same trend was found with the winning numbers that was found with the Mega Ball, the lower numbers tend to be chosen more often while the higher numbers are much more rare. With this in mind I decided to take a deeper dive into the distribution of winning numbers and here is what I saw:

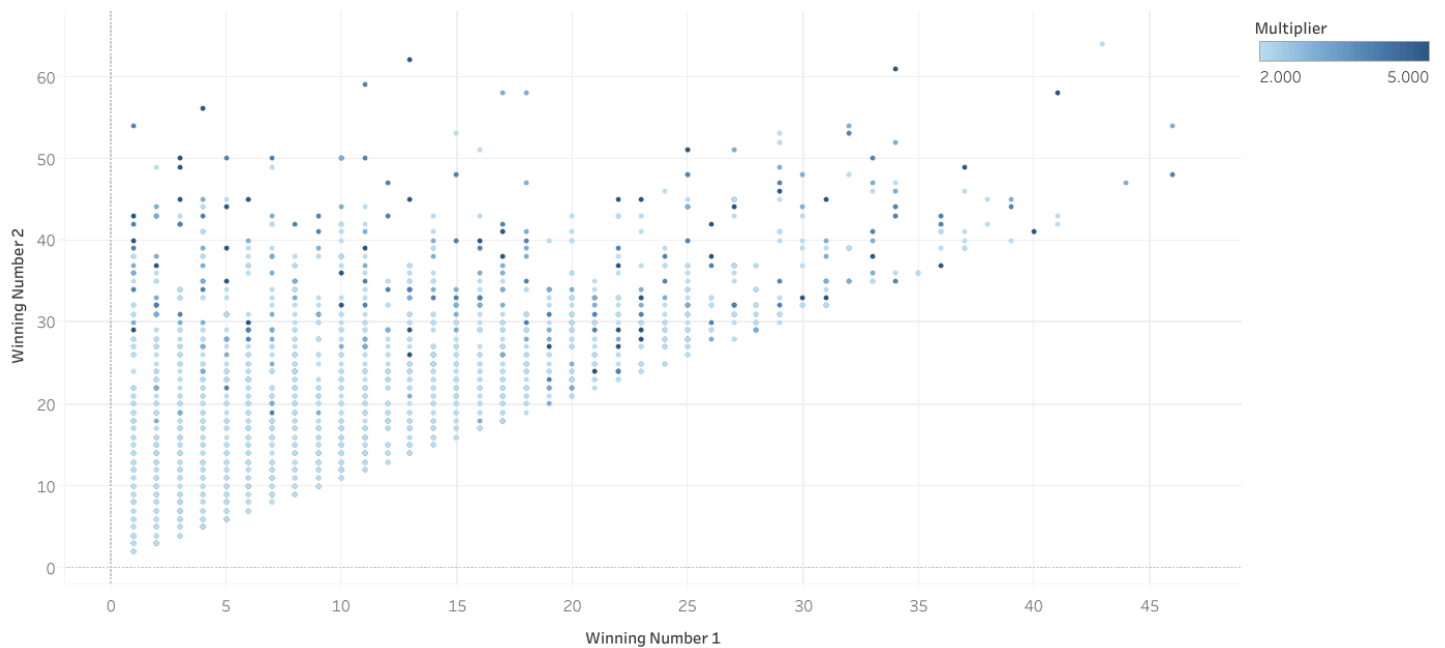## Mega Millions Winning Numbers Count

With a closer look into these numbers you can see a large drop off in the number of times the chosen number wins for any number after 52, this showcases the same trend we had seen
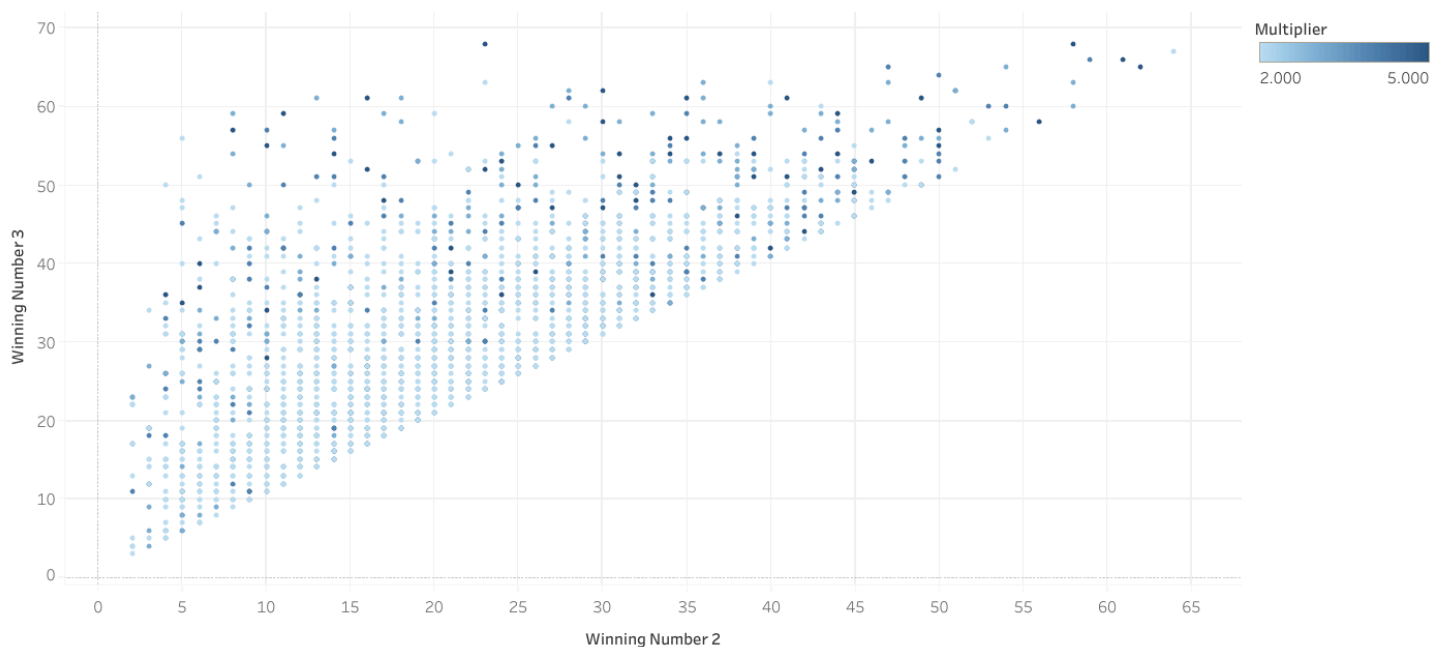
above. With numbers in the range of 1-52 you are more likely to choose a winning number than those after, with the lowest likely to be chosen numbers lying around 71-75 which very rarely get chosen.

To take a closer look at the trends of the individual numbers I ordered them from least to greatest for each set of winning numbers and plotted them against one another to see what trends could be found. Here are each of them compared:
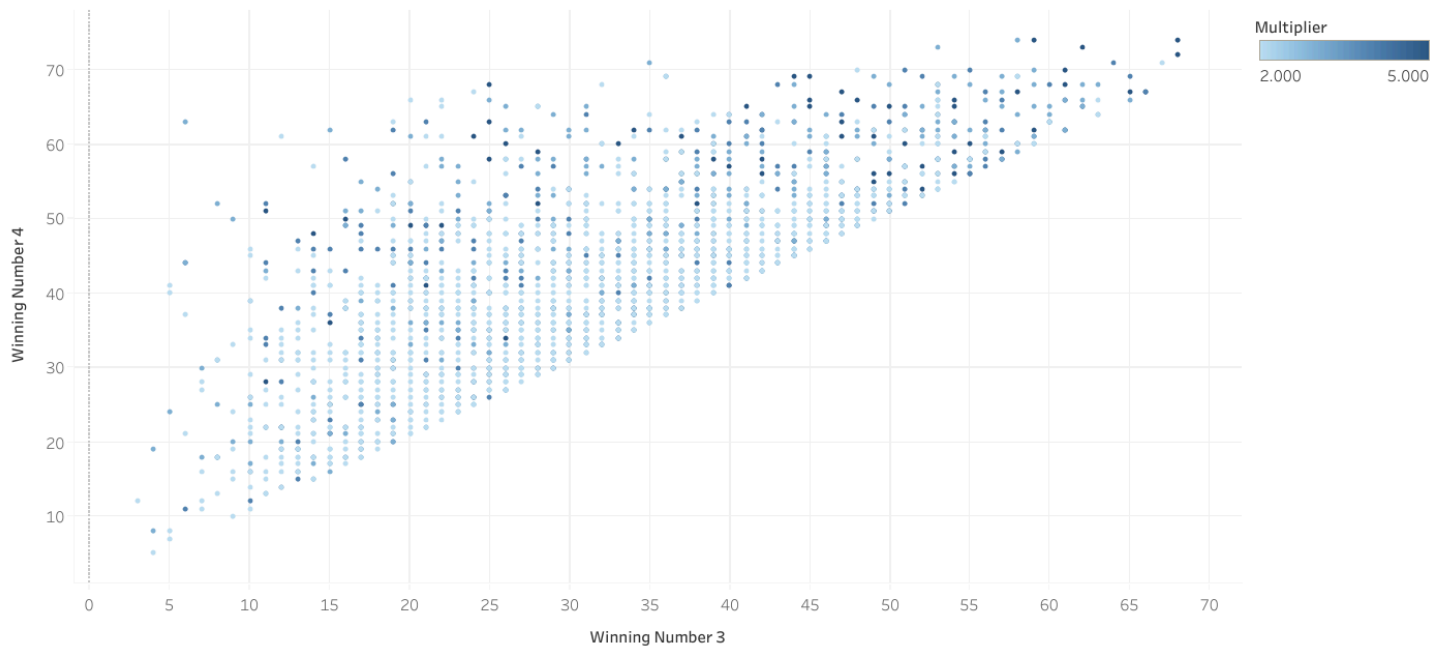
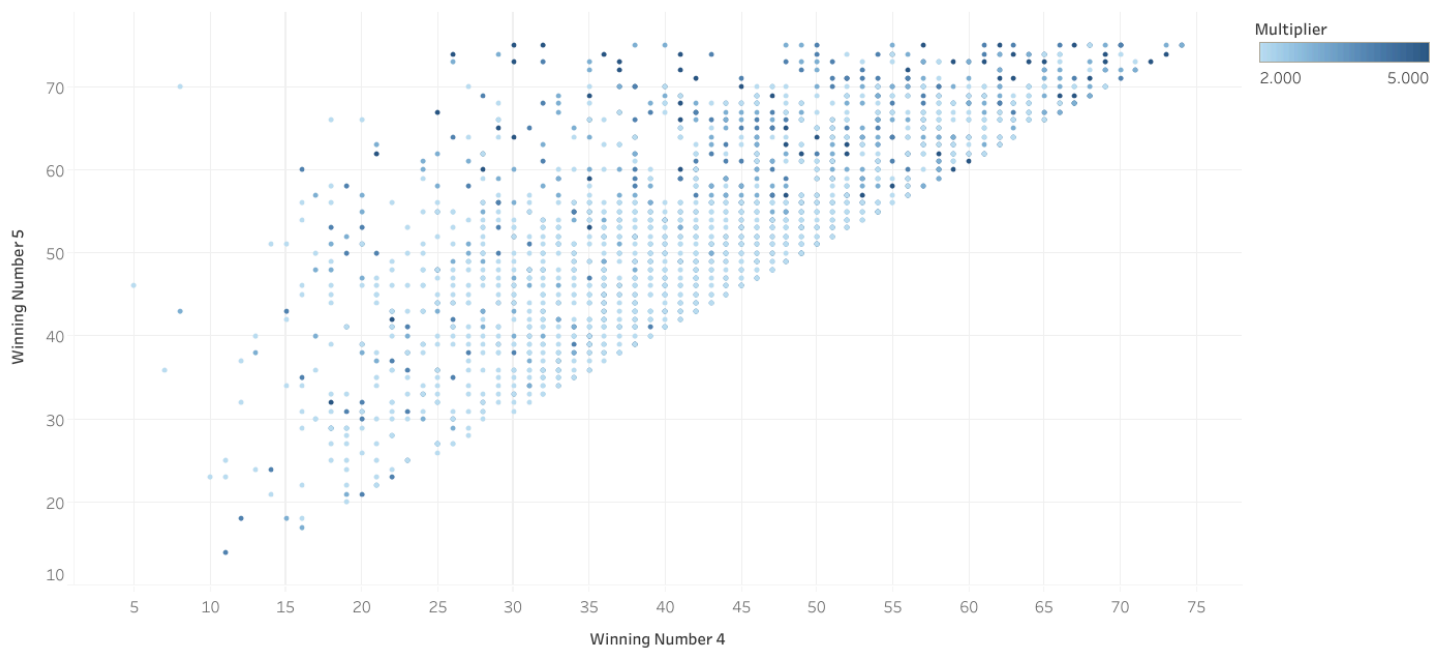Mega Millions Winning Number 1&2

Mega Millions Winning Numbers 2&3

Mega Millions Winning Numbers 3&4

Mega Millions Winning Numbers 4&5

With these new visualizations an interesting pattern arose, the concentration of winning numbers were numbers that were close to one another in order. For example the winning number did not typically jump far from one to another, this can be seen with a concentration along the vertical line. Another finding from this is many of the numbers that were outliers in this trend were numbers pulled with a higher multiplier. This can help guide you when not only deciding what numbers you are choosing but also which multiplier (or lack thereof) you are wanting to play. If you are looking for more consistent trends choosing to not play a high multiplier can be a huge help to your success.

If you decide that this is the lottery for you there are a few of these findings that you should keep in mind. When deciding which lottery is the one you want to participate in try to avoid the multiplier of 4 , this multiplier historically has the most spread out Mega Ball making it very

difficult to win the larger sums of money. You will want to consider choosing either a low multiplier or a round with no multiplier as matching the five numbers becomes more sporadic with the higher multipliers. Once you have settled with which one you are going to play and it is time to choose your Mega Ball number consider choosing a lower number on the range from 4-16 as these historically have the highest rate of success. And finally once you are choosing your numbers aim to choose numbers at or below 52 for the best chance of success and really try to avoid any numbers that go past this range as their historical success rate is extremely low in comparison.

We wish you the best of luck on your next Mega Millions lottery pull!
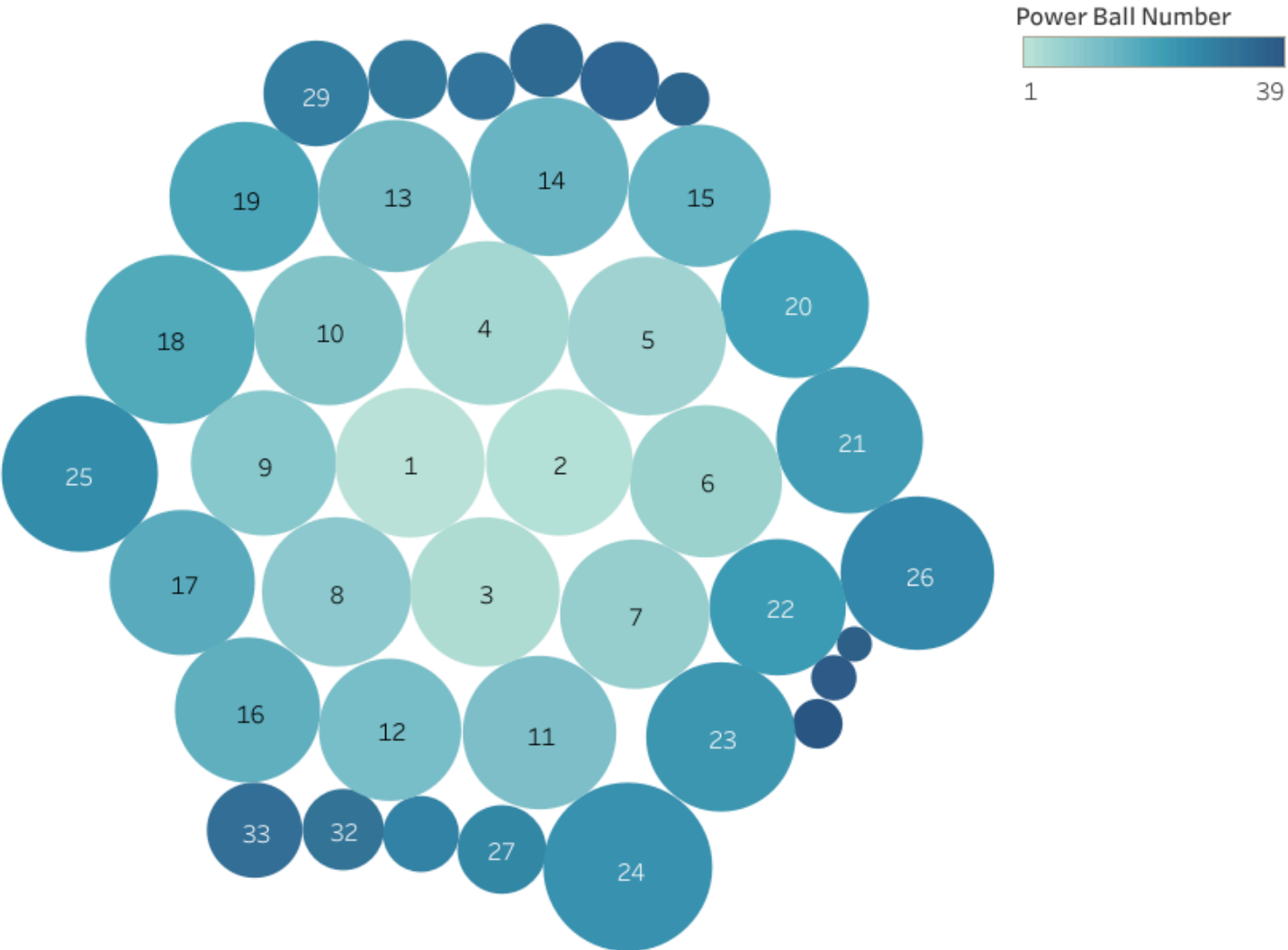
Power Ball

A Millionaire's Gamble

The Power Ball is another popular lottery game that can offer large jackpots. To play this game a player will select 5 white ball numbers from 1-69 and then choose one red ball for the Power Ball number. For the jackpot all of the numbers must match while smaller prizes can be won with partial matches. This lottery has drawings twice a week which brings many players back week after week.

Visualizing the Power Ball

With these rules in mind let's take a closer look into the trends found with the winning numbers. Do some numbers appear more often? These visualizations will break down the trends:
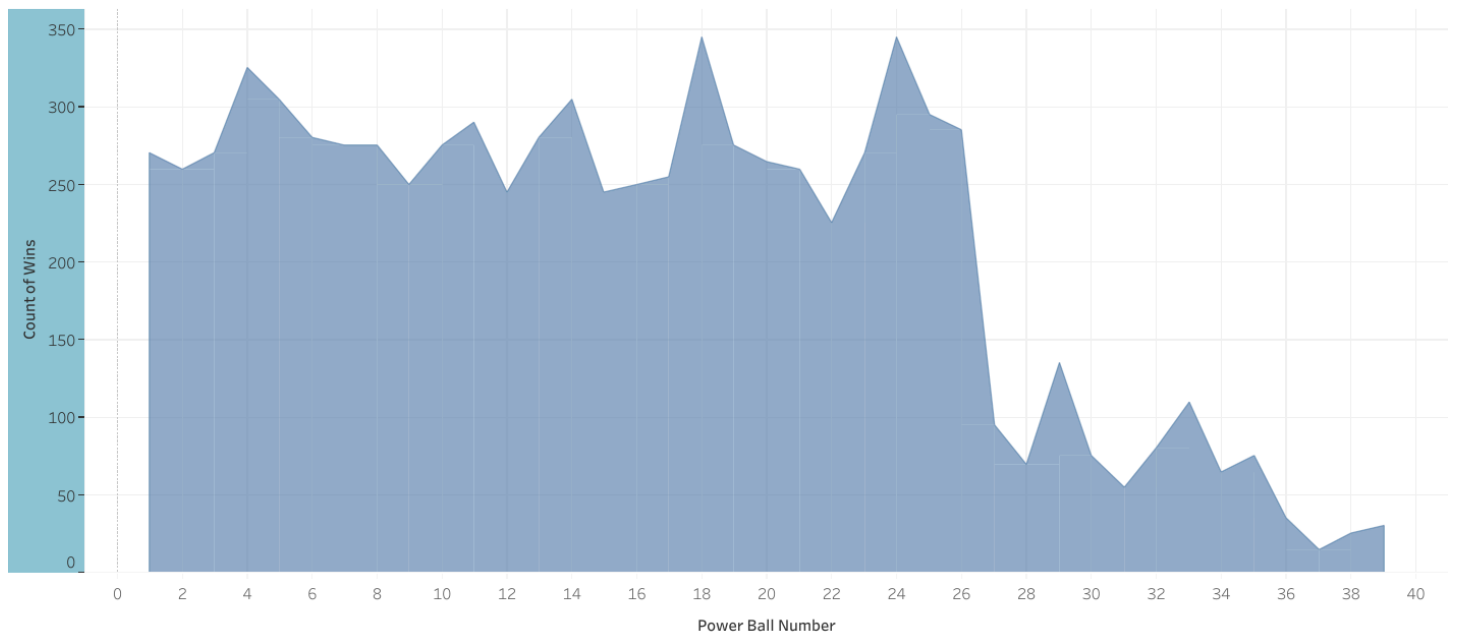
Selected Power Ball Winning Number

For this lottery the Power Ball number is similar to the effects that the Mega Ball has on the Mega Millions however the same trend is not seen here. At first glance the Power Ball numbers show that there is a similar likelihood for each of the numbers through 26.
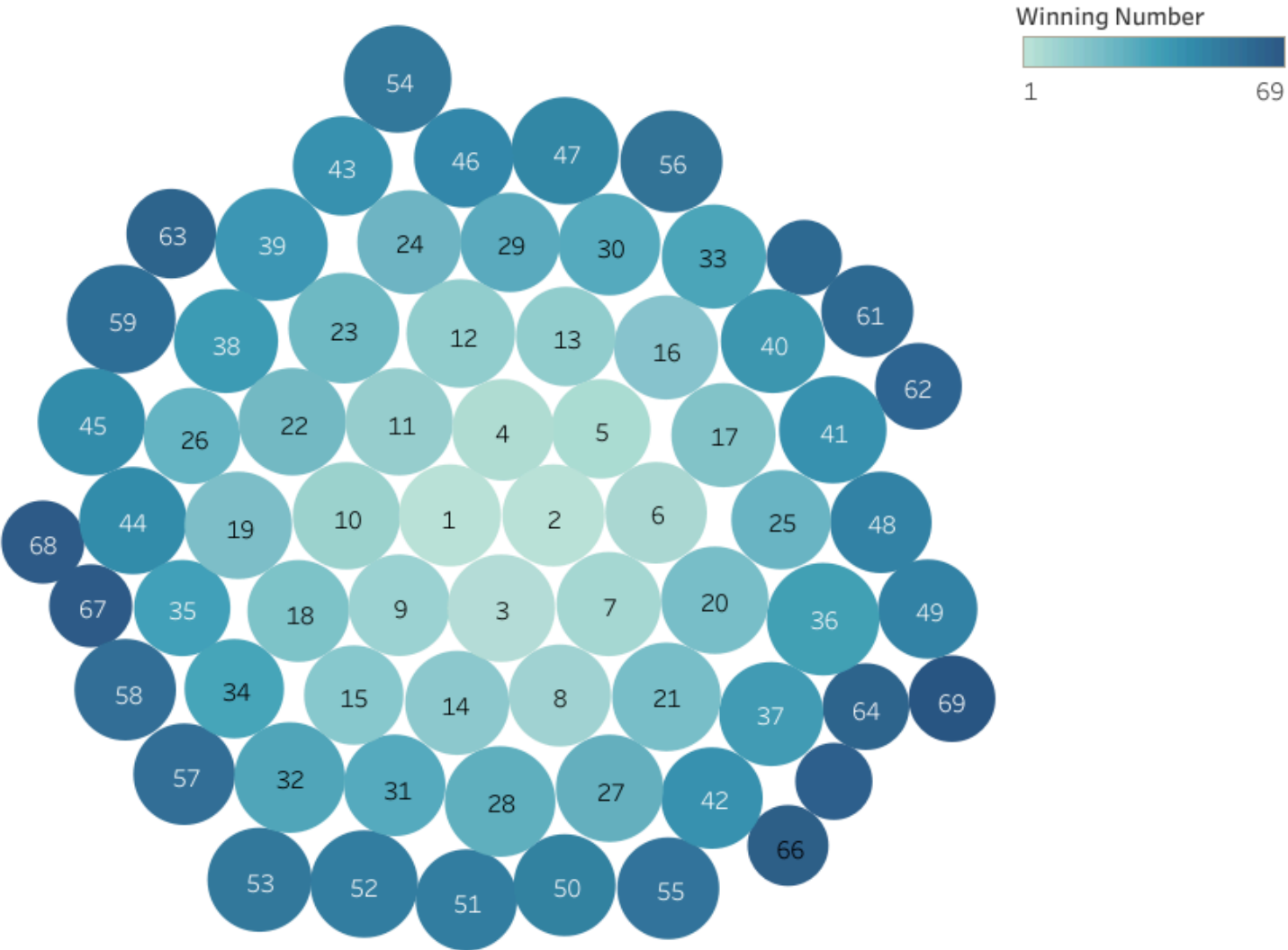
Power Ball Win Density Plot

The Powerball has many peaks and valleys through the win density following no obvious trend unlike the Mega Ball above. the largest finding is the large dip after the number 26, all numbers higher than this were extremely rare when it comes to choosing the winning Power Ball number.
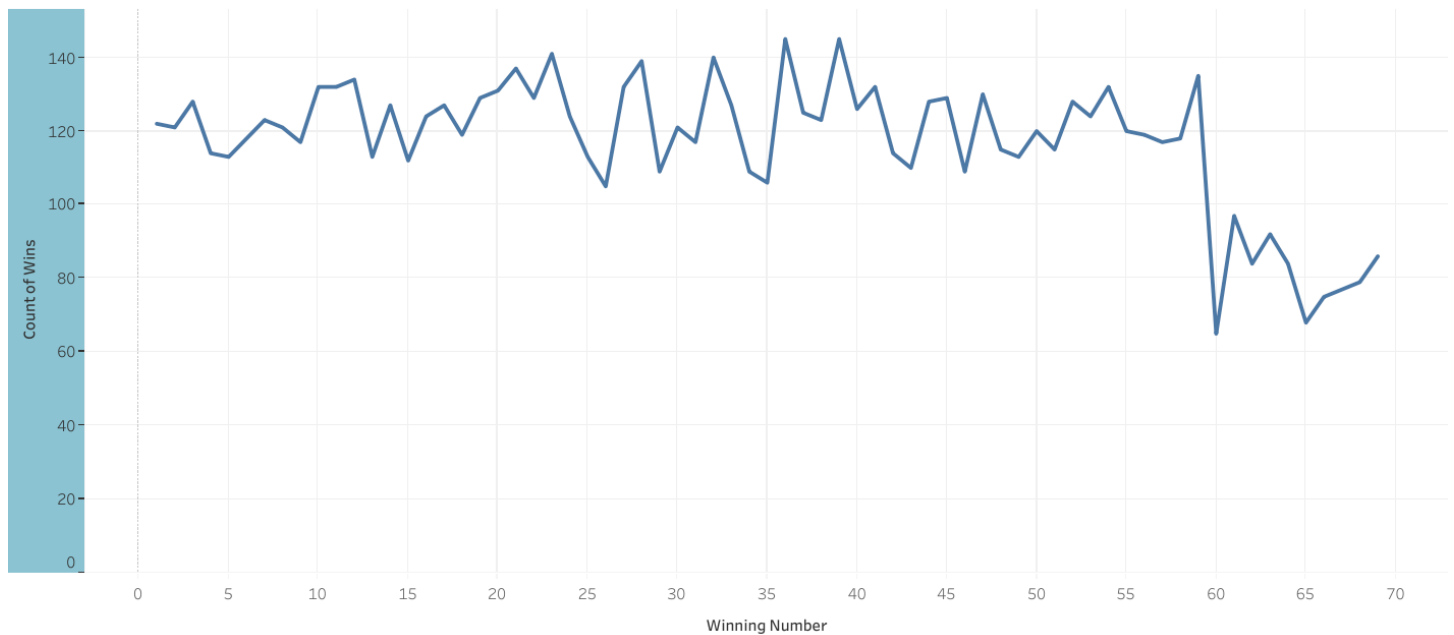
Continuing this analysis I wanted to see if there were any obvious trends in the numbers selected for this lottery, let's take a look:

Power Ball Winning Numbers

Unlike the Mega Millions numbers above many of these bubbles are near the same size showcasing the similar likelihood they have had to be a winning number. There are seemingly smaller chances for the numbers on the extremely high end of the range however these differences are not as large as those seen with the Mega Millions.

Power Ball Winning Numbers

With a closer look into the counts of each winning number compared again we can see no clear trend with consistent peaks and valleys until 60. Once the values reach 60 there is a large decline in the numbers of wins seen for the numbers.

These findings are exciting and interesting when compared to the findings of the Mega Millions above. With these numbers appearing to be much more random this can be a great lottery for you to consider if you do not want to do any further analysis into the trends of the lottery you play. This is a great option for those wanting to play a more random lottery.
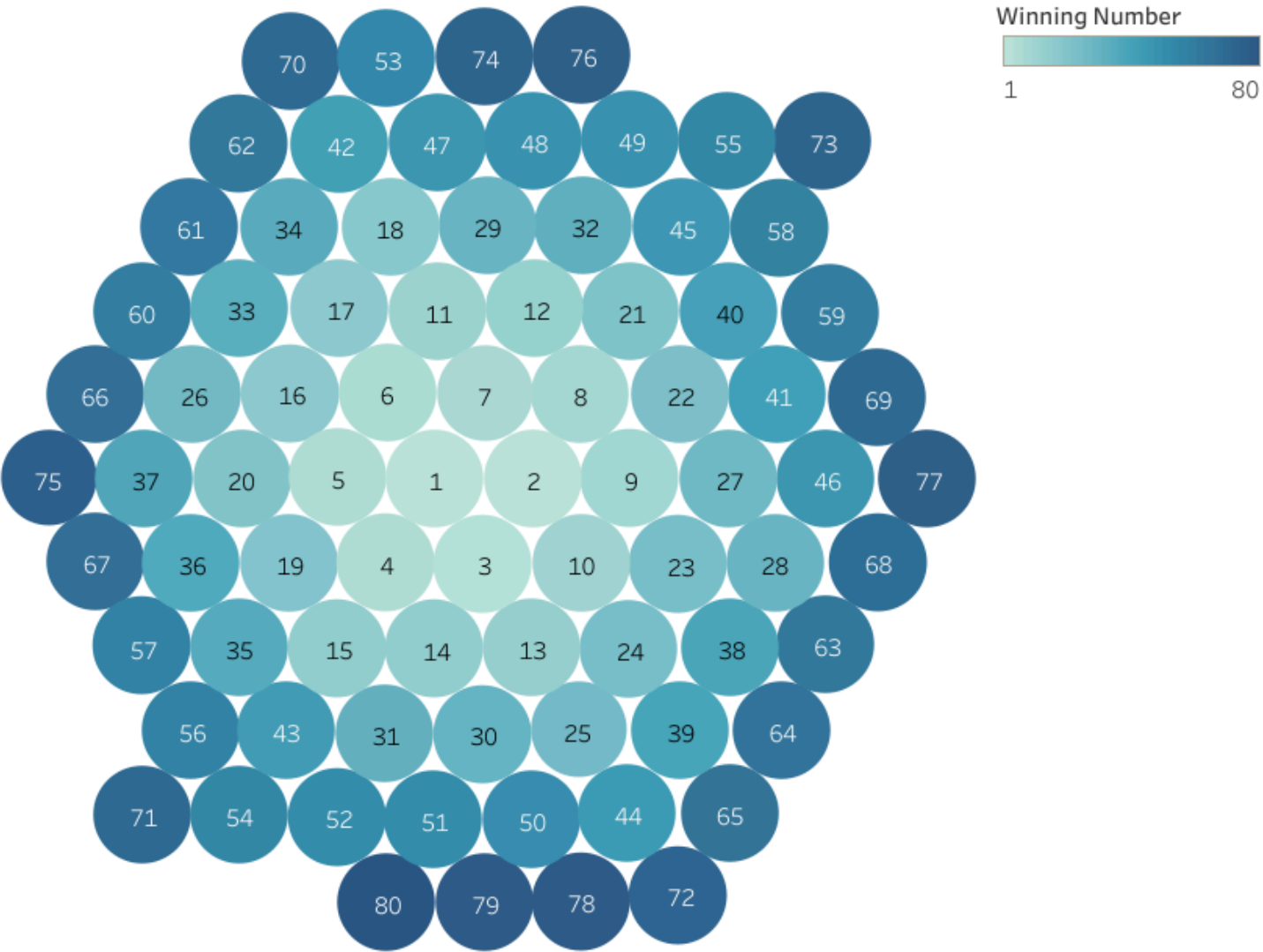
Best of luck on your next Power Ball drawing!

Pick 10

A Crowd Favorite

This popular lottery game lets players choose 10 numbers from a range of 1-80. Each drawing there are 20 winning numbers selected and prizes are given based on the number of matches the player has. This lottery is considered a unique game of luck.
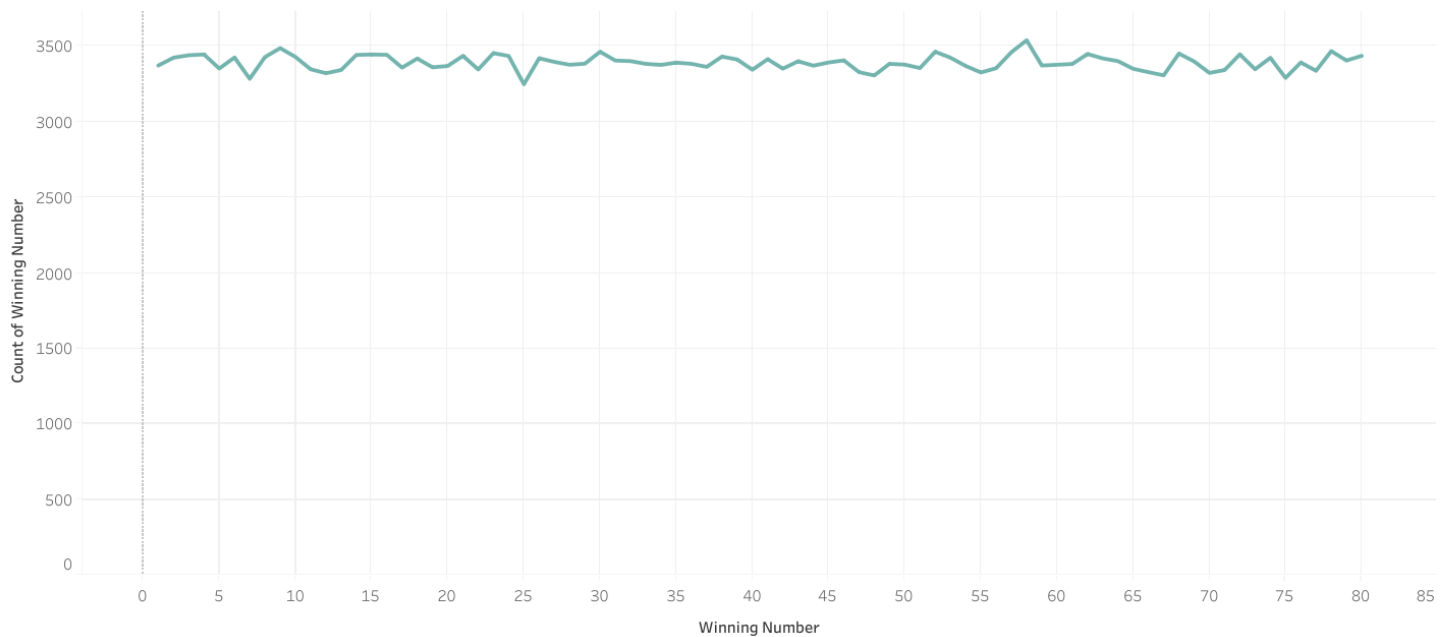
Visualizing the Pick 10

Now that we have gone over the rules of the Pick 10 let's take a deeper look to see if certain numbers have a higher chance of winning or if this one is truly random luck.

Winning Number Count

As seen in the visualization above at first glance this lottery seems to have equal chance for each number. These similar sized bubbles show no clear favoritism of any number in the range. Let's take a closer look:

Pick 10 Winning Number Counts

With comparing these win counts side by side there is no clear trend in fact a near straight line again emphasizes the similar likelihood amongst all of the numbers on the range. This shows a more spread chance for each then both of the lotteries explored above with no drop in chance with the higher numbers on the range.

Keeping this in mind this appears to be the best lottery to participate in if you are hoping for a random number selection. Perfect for players that value luck higher than strategy the Pick 10 lottery is a great option for those not wanting to do any deep dive into the previous data trends!

We wish you great luck on your next Pick 10, you will need it!

Time to Choose

Which lottery is best for you, a game of strategy or luck?

From the three that lotteries we explored trying to find one that is a good fit for you and your play style is essential for you potential future success:

If you are a player who likes deploying strategy, looking at past trends, recent numbers and stats than the Mega Ball is perfect for you! This lottery follows trends that you will be able to try and anticipate to give you the best chance of a win.

However if you are someone that does not want to deploy any strategy and wants to choose numbers at random and use your luck to be your guide than the Pick 10 is perfect for you! This one has no clear trend and appears to be the most random out of all three of the lotteries that were analyzed.

For those that want to utilize a bit of their strategy skills as well as their luck than the Power Ball could be a great option for you! This one does have some trends that can be viewed however does have a good amount of luck involved as well.

Reach Out

Let us know your thoughts and experience!

Do you have any tricks that have helped you in the past, or anything that you avoid to give you the best chance?

Are there other types of lotteries that you want us to take a deeper look into, maybe your personal favorite or one you have never tried?

We rely on your feedback to influence next months Lotto Logic article for Gamblers Monthly!

Thanks for reading and best of luck, we look forward to hearing your experience!

Gamblers Monthly Author
-Allison Biediger