

Number arrangements and wheels in LSA

Introduction

LSA wheel window has had many improvements since its first implementation back in version 3.

The latest version is by far the best yet and will almost certainly change the way people regard and play wheels forever.

I have spent over 20 months analysing wheels, and have wrote over 30 applications to aid in creating the best wheels possible to provide the best chances of winning prizes.

The conclusion arrived at after this time. "Reduced wheel systems **reduce** your chances of winning prizes." I explain how this is possible in the section **why Reduced Wheels Reduce Odds**.

After much time and effort researching wheels I discovered the best method of arranging numbers to maximize prizes for tickets played. I have called this new technique **Maximized Number Arrangements** or MNA for short.

On average a MNA will outperform even the best reduced wheel system by around 20% to 25%.

That means you will win 20% to 25% more by playing MNA's compared to playing the same number of tickets in reduced wheels. A bold statement I know, so here is the proof to back it up.

Maximized Number Arrangements vs. Reduced Wheels

Maximized Number Arrangement	Reduced Wheel
Pick: 6 : Numbers drawn in lottery Pool: 15 : Range covered in MNA Match: 3 : Matches needed for a win Combos: 420 : Number of combos covered Tickets: 10 : Amount of lines Numbers Used: 2 8 10 13 15 19 28 32 33 34 35 36 38 46 47	Pick: 6 : Numbers drawn in lottery Pool: 10 : Range covered in wheel Match: 3 : Matches needed for a win Combos: 326 : Number of combos covered Tickets: 10 : Amount of lines Numbers Used: 2 8 13 28 32 34 36 38 46 47
01 02 06 07 09 10 01 02 08 11 12 13 01 03 04 05 06 08 01 03 07 11 14 15 02 03 04 09 12 14 02 03 05 10 13 15 04 05 07 09 11 13 04 06 10 11 12 15 05 07 08 10 12 14 06 08 09 13 14 15	01 02 03 04 05 10 01 02 03 06 07 10 01 02 03 08 09 10 01 02 04 05 08 09 01 03 04 06 07 09 01 03 05 06 07 08 02 04 06 07 08 10 02 05 06 07 09 10 03 04 05 06 08 09 04 05 07 08 09 10
3 Ball combos: 200 out of 200 from 10 tickets. 4 Ball combos: 150 out of 150 from 10 tickets. 5 Ball combos: 60 out of 60 from 10 tickets. 6 Ball combos: 10 out of 10 from 10 tickets.	3 Ball combos: 120 out of 200 from 10 tickets. 4 Ball combos: 136 out of 150 from 10 tickets. 5 Ball combos: 60 out of 60 from 10 tickets. 6 Ball combos: 10 out of 10 from 10 tickets.
Total Ways To Win 420 From 10 Tickets	Total Ways To Win 326 From 10 Tickets
Increase changes of a win 94 that's 22.4% more chances of a win using LSA's MNA	

The reduced wheel used is taken from LSA and is a 3 if 3 from a pool of 10 in a 6 pick draw. 10 tickets are the least lines possible to produce such a wheel, I know this because I analysed every single possible combination, it took over 4 weeks to complete running custom software I wrote on a Quadcore pc with 8 GB of RAM.

Why Reduced Wheels Reduce Odds.

It's really quite simple, in a reduced wheel you have to repeat winning combinations to cover the required rules. Your overall odds of winning the first prize are directly proportional to the tickets purchased. 1 ticket will provide 1 chance of winning the jackpot, 10 tickets will give you 10 chances. However the way you arrange these numbers effects the smaller prizes covered. For example take a draw with 49 numbers; you place 1 ticket on the lottery, on that ticket you select 6 numbers.

Prizes are available if you hit 3, 4, 5 or 6, the ticket cost you £1, now we break down the 6 numbers chosen into possible wins.

3 Ball combinations covered = 20

1 2 3 -1 2 4 -1 2 5 -1 2 6 -1 3 4 -1 3 5 -1 3 6 -1 4 5 -1 4 6 -1 5 6 -2 3 4 -2 3 5 -2 3 6 -2 4 5 -2 4 6 -2 5 6 -3 4 5 -3 4 6 -3 5 6 -4 5 6

4 Ball combinations covered = 15

1 2 3 4 -1 2 3 5 -1 2 3 6 -1 2 4 5 -1 2 4 6 -1 2 5 6 -1 3 4 5 -1 3 4 6 -1 3 5 6 -1 4 5 6 -2 3 4 5 -2 3 4 6 -2 3 5 6 -2 4 5 6 -3 4 5 6

5 Ball combinations covered = 6

1 2 3 4 5 -1 2 3 4 6 -1 2 3 5 6 -1 2 4 5 6 -1 3 4 5 6 -2 3 4 5 6

6 Ball combinations covered = 1

1 2 3 4 5 6

Total ways to win = 42 with 1 ticket. So 100p (your bet) / 42 (possible wins) = 0.23p per bet

0.23p per bet is the base bet for this draw. This number can never decrease and you should always try to make sure it never increases; if it does you are reducing your odds vs. how much you are betting. Now let's compare the example wheel and the MNA shown earlier.

Reduced Wheel: Total Ways To Win **326** From 10 Tickets:

100 / 326 = 0.30p per bet

Maximized Number Arrangement: Total Ways to Win **420** from 10 Tickets:

100 / 420 = 0.23p per bet

Conclusion: A Maximized Number Arrangement maximizes cost per possible win hence the chances of a win from the tickets purchased.

Within a couple of years of the release of this new system in LSA v4.4.4 Aug 2010 I can see most lottery sites, software and books following suite removing traditional wheels and replacing them with MNA's, so remember where you seen them first.

LSA Wheel Window Overview

General Information:

Here you can see tips and information about how to use the window.

Step by Step instructions:

Use the arrows to run through the steps in creating a wheel, information about each step is shown in the General Information area.

Type of Arrangements to Use:

LSA has 3 types of number arrangements to choose from.

1. Maximum win coverage possible for tickets played - 1 common number
2. Maximum win coverage possible for tickets played - mixed
3. Reduced wheels

1: Maximum win coverage possible for tickets played - 1 common number

These are Maximized Number Arrangements (MNA's), the way I recommend you play multiple lines in any draw because they give an average of over 25% increase in prizes compared to the traditional reduced number wheels. These MNA's have one number in common one for each ticket, let me point out there is no mathematical basis to having a common number but if you have a lucky number you like to play then use this system to have your lucky number appear on each ticket while keeping the maximum wins possible on all tickets played.

2: Maximum win coverage possible for tickets played – mixed

The original Maximized Number Arrangements (MNA's) , as above but all mixed numbers keeping the maximum number of wins possible in the group of numbers played.

3: Reduced Wheels

The common every day wheels found on websites around the globe, propaganda spread by the masses making lottery players believe they are increasing their odds of winning when it is doing the exact opposite. A harsh statement; but a mathematical fact.

Statement 1: plus

Reduced wheels enable you to cover a section of the overall pool of numbers in the minimum lines.

Statement 2: plus

Because of the guarantees you get using reduced wheels it makes it easy to know if you have won by just knowing the numbers you played, you pick 9 numbers then 3 of your 9 appear you then know at least one ticket will be a winner.

Statement 3: Negative

Reduced wheels make the overall bet you placed less likely to win a prize than using one of LSA's MNA's. Over 25% in most cases. See Number arrangements and wheels in LSA for more information on this.

LSA offer a large number of reduced wheels, as good as or better than you will find anywhere else on the internet or any other systems, we scanned millions of combinations of numbers over many months to find these wheels and if you are going to play a reduced system then you can be sure the wheels offered are as good as they get with LSA.

The wheels available are updated from time to time but no need to worry about checking our site as LSA will download any updated wheels or ne wheel when you use the live update.

Available Wheels and Number Arrangements.

This area lists all wheels and MNA's available from the latest update. The numbers that are available will continue to increase as we add more and more.

The updates are automatically downloaded when available when you use the live update feature to update any draw in LSA.

Number Sets to use

Before creating a wheel or MNA you need to choose the numbers to inject into the system.

Using the *Number Sets to use* list labelled 4 in the wheel window combined with the dropdown list found in the same area you can choose various predefined numbers or set your own numbers.

Appearance Filters

- Oldest ball appearances to latest
- Latest ball appearances to oldest

Best to play based on Normal Distribution of entire draw

- Use highest occurring numbers as B#-B# from all ##### combos

Cold Filters

- Cold to Hot (Split 50/50)
- Cold to Warm (Split 50/50)
- Cold | Warm (Mixed)

Custom Filters

- Use my own numbers
- 1 to textbox count
- Filters Blank

Hot Filters

- Hot to Warm (Split 50/50)
- Hot to Cold (Split 50/50)
- Hot | Cold (Mixed)

Hot, Warm & Cold filters

- Hot | Warm | Cold (Mixed)
- Warm | Cold | Hot (Mixed)
- Cold | Hot | Warm (Mixed)

Warm Filters

- Warm to Hot (Split 50/50)
- Warm to Cold (Split 50/50)
- Warm | Cold (Mixed)

Most of the above is self explanatory so I won't go through and explain every item but I will explain a number of them.

Appearance Filters = As numbers appear LSA sets their appearance count to 0 for every draw that passes where they don't appear a value of 1 is added to the numbers appearance count so larger numbers have not appeared for longer times, selecting the options listed under **Appearance Filters** allows you to inject these findings directly into a wheel or MNA.

Best to play based on Normal Distribution of entire draw

Using past numbers for choosing your winning ticket may be fun but mathematical it's equivalent to taking five humans from the population of our planet and asking them their date of birth, then presuming the next human you take from our planet is going to share one of their birthdays. OK now and again the odd one may share the birthday but most won't.

This is why I have added the **Best to play based on Normal Distribution of entire draw** to LSA.

The following is assuming a lottery with 49 balls with a pick 6.

The concept is simple, you are betting against a pool of numbers that has millions of combinations. Use all the combinations to mathematically select the numbers to play not just a very small handful.

Every draw when drawn is split from lowest to highest (numerical order) so B1 would be the lowest number drawn B2 the second lowest of the numbers drawn and so on.

LSA scans all possible combinations in the entire draw counting how many times each number appears as B1,B2 B3,B4,B5,B6 then from the findings adds them to the *Numbers to Use In Wheel*

textboxes. To prevent any bias LSA adds to the *Numbers to Use In Wheel* textboxes from left to right the highest occurring B1 to the first box, then the highest occurring B2 to the second box and so on, the 7th textbox would be the second highest occurring B1 in a pick 6 draw and the 8th textbox the second highest occurring B2 and so on until all the boxes are filled with enough numbers to complete the wheel or MNA.

I personally recommend this be used with MNA's as your entire bet is based on the best chances mathematically you can get with the draw in question. You won't get better odds with any other lottery system, and I will give anyone who can better my MNA system a free copy of LSA, I will save you time, I won't be giving out any free copies as you won't be able to beat it, but don't take my word for it, please do try to prove me wrong, its challenging and fun, to some of us anyway.

Cold Filters, Hot Filters, Hot, Warm & Cold filters and Warm Filters

All these filters populate the *Numbers to Use in Wheel* textboxes with numbers based on various analyses of past draws, a hot number is said to be due out where a cold number has appeared recently.

Custom Filters

A few notes on these.

- **Use my own numbers:** Allows you to enter manually your own numbers to inject into the system.
- **1 to textbox count:** This is very useful to see the wheel in its standard format i.e. as it was made.
- **Filters Blank:** Removes all text from all textboxes allowing starting from scratch quickly.

Numbers to Use in Wheel

The textboxes that appear across the screen are the numbers pre wheel. The numbers can be selected by you or added by LSA. See the section **Number Sets to use** for an in detailed look at how to use the window correctly and how LSA selects numbers for you.

Detailed wheel Statistics

If you have used previous versions of LSA you will notice the wheel window is somewhat larger then in earlier versions, this is to accommodate this new area that gives you full statistics of the wheel or MNA.

The left hand side displays statistical information regarding the wheel or MNA versus the number of tickets produced.

The right hand side displays statistical information regarding the wheel or MNA versus the total number of combinations possible in the entire pool of numbers found in the pool you are playing.

When you print a wheel some of this information will also be printed.

Final Wheel

Lists the complete wheel or MNA to use in the draw.

When Generate is clicked the wheel is produced based on all settings selected, but no sorting is made, so for ease of placing bets use the *Sort per Line* to sort the numbers in numerical order, this will not affect the wheels properties. However note by sorting from the Sort All button will rearrange the numbers in the tickets you play but again won't affect the wheels properties.

Print Wheel

Below is a typical report for a reduced wheel generated by LSA.

=====**Example Reduced Wheel Start**=====
[Lottery Statistic Analyser]

Pick: 6 : Numbers drawn in lottery
Pool: 8 : Range covered in wheel
Match: 3 : Matches needed for a win
Combos: 138 : Number of combinations this wheel covers
Tickets: 4 : Amount of lines, in most draws will also equal the cost to play this wheel

Numbers Used: 1 2 10 11 20 30 40 49

This wheel guarantee's a 3 match win if any 3 of your 8 numbers are drawn

The different combinations found in this wheel are as follows.

3 Ball combinations: 56 out of 80 possible 3 ball combinations from 4 tickets.

4 Ball combinations: 54 out of 60 possible 4 ball combinations from 4 tickets.

5 Ball combinations: 24 out of 24 possible 5 ball combinations from 4 tickets.

6 Ball combinations: 4 out of 4 possible 6 ball combinations from 4 tickets.

Total Ways to Win From 4 Tickets = 138

----- **Start** -----

10	20	30	40	02	11
01	30	40	49	02	11
01	10	20	40	49	02
01	10	20	30	49	11

----- **End** -----

The wheel has been formatted so it can be cut and pasted to spread sheets.

=====**Example End**=====

The layout is simple but informative, note the statistics section titled **The different combinations found in this wheel are as follows** is relating to all the possible combinations you can fit into 4 lines not how many 3 ball combinations that can be found in 8 numbers which would be 56 if interested.

Below is a typical report for a Maximized Number Arrangement generated by LSA.

=====Example Maximized Number Arrangement Start=====

[Lottery Statistic Analyser]

Pick: 6 : Numbers drawn in lottery
Compos: 168 : Number of combinations this wheel covers
Tickets: 4 : Amount of lines, in most draws will also equal the cost to play this wheel

Numbers Used: 1 2 10 11 20 21 29 30 39 40 48 49

The different combinations found in the Maximized Win Arrangement are as follows.

- 3 Ball combinations: 80 out of 80 possible 3 ball combinations from 4 tickets.**
- 4 Ball combinations: 60 out of 60 possible 4 ball combinations from 4 tickets.**
- 5 Ball combinations: 24 out of 24 possible 5 ball combinations from 4 tickets.**
- 6 Ball combinations: 4 out of 4 possible 6 ball combinations from 4 tickets.**

Total Ways to Win From 4 Tickets = 168

----- Start -----

01	30	49	02	11	39
01	40	49	21	29	48
10	20	30	40	02	21
10	20	11	29	39	48

----- End -----

The wheel has been formatted so it can be cut and pasted to spread sheets.

=====Example End=====

Note how well the above outperforms the reduced wheel, 30 more chances of a win with the same number of tickets, that's just 4 lines, select larger wheels and MNA's to see these numbers grow.

The term wheel is used a lot when it comes to lotteries so let me define my take on this. A wheel is a reduced number system that's primary goal is to reduce lines (tickets) played for maximum numbers covered. A Number Arrangement such as LSA MNA's is a set of lines that's primary goal is to maximize possible wins per number of tickets played.