

Package ‘valottery’

October 12, 2022

Type Package

Title Results from the Virginia Lottery Draw Games

Version 0.0.1

Date 2015-08-31

Description Historical results for the state of Virginia lottery draw games. Data were downloaded from <https://www.valottery.com/>.

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LazyData TRUE

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NeedsCompilation no

Repository CRAN

Date/Publication 2015-09-02 15:52:25

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`cash.4.life`*CASH4LIFE*

Description

Historical data for the CASH4LIFE game. Game play: Pick five different numbers from 1 through 60; then select one Cash Ball number from 1 through 4.

Usage

```
cash.4.life
```

Format

A data frame with 34 rows and 7 variables:

date date of draw

cashball cash ball result

N1 1st number in order

N2 2nd number in order

N3 3rd number in order

N4 4th number in order

N5 5th number in order

Source

<https://www.valottery.com>

Examples

```
## Check numbers drawn are uniformly distributed
x <- qunif(ppoints(nrow(cash.4.life)*5),1,60)
y <- sort(unlist(cash.4.life[,3:7]))
qqplot(x,y)
```

`cash.5.1xday`*Cash 5 (once daily)*

Description

Historical data for the Cash 5 once daily game. Game Play: Pick five numbers from 1 through 34.
Note: On April 11, 1999, Cash 5 switched to twice daily drawings.

Usage`cash.5.1xday`**Format**

A data frame with 1187 rows and 6 variables:

date date of draw

N1 1st number in order

N2 2nd number in order

N3 3rd number in order

N4 4th number in order

N5 5th number in order

Source

<https://www.valottery.com>

`cash.5.2xday`*Cash 5 (twice daily)*

Description

Historical data for the Cash 5 twice daily game. Game Play: Pick five numbers from 1 through 34.
Note: On April 11, 1999, Cash 5 switched to twice daily drawings.

Usage`cash.5.2xday`

Format

A data frame with 11,164 rows and 7 variables:

date date of draw

time time of drawing: day or night

N1 1st number in order

N2 2nd number in order

N3 3rd number in order

N4 4th number in order

N5 5th number in order

Source

<https://www.valottery.com>

Examples

```
max.days <- apply(subset(cash.5.2xday,time=="day",-1:2),1,max)
max.nights <- apply(subset(cash.5.2xday,time=="night",-1:2),1,max)
op <- par(mfrow=c(1,2))
hist(max.days)
hist(max.nights)
par(op)
```

decades.of.dollars *Decades of Dollars*

Description

Historical data for the Decades of Dollars game. You pick six (6) numbers, the Lottery will then select six (6) numbered balls. Note: This game was discontinued in favor of CASH4LIFE.

Usage

```
decades.of.dollars
```

Format

A data frame with 443 rows and 7 variables:

date date of draw

N1 1st number in order

N2 2nd number in order

N3 3rd number in order

N4 4th number in order

N5 5th number in order

N6 6th number in order

Source

<https://www.valottery.com>

mega.mill.1

Mega Millions (Before 10/22/13)

Description

Historical data for the Mega Millions game. On October 22, 2013, the format changed from 5/56 + 1/46 to the current 5/75 + 1/15 format. Game play: Pick five different numbers from 1 through 75; then select one Mega Ball number from 1 through 15.

Usage

mega.mill.1

Format

A data frame with 1,713 rows and 7 variables:

date date of draw

megaball megaball result

N1 1st number in order

N2 2nd number in order

N3 3rd number in order

N4 4th number in order

N5 5th number in order

Source

<https://www.valottery.com>

mega.mill.2

Mega Millions (10/22/13 and beyond)

Description

Historical data for the Mega Millions game. On October 22, 2013, the format changed from 5/56 + 1/46 to the current 5/75 + 1/15 format. Game play: Pick five different numbers from 1 through 56; then select one Mega Ball number from 1 through 46.

Usage

mega.mill.2

Format

A data frame with 194 rows and 7 variables:

date date of draw

megaball megaball result

N1 1st number in order

N2 2nd number in order

N3 3rd number in order

N4 4th number in order

N5 5th number in order

Source

<https://www.valottery.com>

money.ball	<i>\$1,000,000 Money Ball</i>
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Description

Historical data for the \$1,000,000 Money Ball game. Game Play: pick five numbers 1 - 35, the Lottery then selects five numbered balls. If the Gold Million Dollar Money Ball is drawn before all five numbers have been selected, the top prize jumps to \$1,000,000. Note: This game was discontinued 8/29/15.

Usage

money.ball

Format

A data frame with 100 rows and 7 variables:

date date of draw

moneyball money ball result: yes or no

N1 1st number in order

N2 2nd number in order

N3 3rd number in order

N4 4th number in order

N5 5th number in order

Source

<https://www.valottery.com>

Examples

```
## probability of drawing money ball before first 5 balls
(1/36) + (1/35) + (1/34) + (1/33) + (1/32)
## observed money ball results
prop.table(table(money.ball$moneyball))
## simulate money ball draws before first 5 draws
set.seed(123)
mean(replicate(1000, any(sample(c(1:35,"mb"),5)=="mb")))
```

pick.3.1xday

Pick 3 (once daily)

Description

Historical data for the Pick 3 once daily game. Game Play: Pick a three digit number from 000 through 999. Note: On January 30, 1995, Pick 3 switched to twice daily drawings.

Usage

```
pick.3.1xday
```

Format

A data frame with 1,777 rows and 4 variables:

date date of draw

N1 1st digit

N2 2nd digit

N3 3rd digit

Source

<https://www.valottery.com>

Examples

```
lapply(pick.3.1xday[, -1], function(x) round(prop.table(table(x)), 2))
```

pick.3.2xday

Pick 3 (twice daily)

Description

Historical data for the Pick 3 twice daily game. Game Play: Pick a three digit number from 000 through 999. Note: On January 30, 1995, Pick 3 switched to twice daily drawings.

Usage

pick.3.2xday

Format

A data frame with 13,790 rows and 5 variables:

date date of draw

time time of drawing: day, night1 or night2 (Note: two nightly drawings were held on 10/30/08 and 11/09/08)

N1 1st digit

N2 2nd digit

N3 3rd digit

Source

<https://www.valottery.com>

pick.4.1xday

Pick 4 (once daily)

Description

Historical data for the Pick 4 once daily game. Game play: Pick a four digit number from 0000 through 9999. Note: On January 30, 1995, Pick 4 switched to twice daily drawings.

Usage

pick.4.1xday

Format

A data frame with 1,041 rows and 5 variables:

date date of draw

N1 1st digit

N2 2nd digit

N3 3rd digit

N4 4th digit

Source

<https://www.valottery.com>

Examples

```
## Any Pick 4 happen more than once?
results <- apply(pick.4.1xday[,-1],1,function(x)paste(x,collapse = ""))
any(table(results) > 1)
## Which numbers?
i <- which(table(results) > 1,useNames = FALSE)
sort(table(results)[i],decreasing = TRUE)
```

pick.4.2xday

Pick 4 (twice daily)

Description

Historical data for the Pick 4 twice daily game. Game play: Pick a four digit number from 0000 through 9999. Note: On January 30, 1995, Pick 4 switched to twice daily drawings.

Usage

pick.4.2xday

Format

A data frame with 13,788 rows and 6 variables:

date date of draw

time time of drawing: day or night

N1 1st digit

N2 2nd digit

N3 3rd digit

N4 4th digit

Source

<https://www.valottery.com>

`power.ball`*Power Ball*

Description

Historical data for the Power Ball game. Game play: Pick five different numbers from 1 through 59; then select one Powerball number from 1 through 35.

Usage`power.ball`**Format**

A data frame with 582 rows and 7 variables:

date date of draw

powerball powerball result

N1 1st number in order

N2 2nd number in order

N3 3rd number in order

N4 4th number in order

N5 5th number in order

Source

<https://www.valottery.com>

Examples

```
## According to game rules, the powerball is numbered 1 - 35,  
## but apparently there were times when it went up to 39  
i <- power.ball$powerball > 35  
any(i)  
sum(i)  
power.ball$powerball[i]
```

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