LA 1

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```
df1 = read.csv('banned_maps_stats.csv')
df1
```

```
##      Map Total Day.1 Day.2 Day.3 Day.4 Day.5 Day.6 Day.7
## 1 Ascent     2     0     0     1     0     1     0     0
## 2   Bind     9     2     3     1     2     1     0     0
## 3  Haven     3     0     0     1     1     0     1     0
## 4 Icebox     8     1     1     0     2     2     2     0
## 5  Split    12     3     2     3     1     2     1     0
```

```
df2 = read.csv('side_pick_stats.csv')
df2
```

```
##      Map Atk.Wins Def.Wins
## 1 Ascent       96      130
## 2   Bind       74       55
## 3  Haven      130      105
## 4 Icebox       99       88
## 5  Split       44       53
```

```
df3 = read.csv('map_pick_stats.csv')
df3
```

```
##      Map Total Day.1 Day.2 Day.3 Day.4 Day.5 Day.6 Day.7
## 1 Ascent    16     3     3     2     3     2     2     1
## 2   Bind     9     1     0     2     1     2     2     1
## 3  Haven    15     3     3     2     2     3     1     1
## 4 Icebox    10     2     2     3     1     1     0     1
## 5  Split     6     0     1     0     2     1     1     1
```

```
df4 = read.csv('player_stats.csv')
df4
```

```
##       Player        Country           Team                          Agents Maps
## 1       TenZ         Canada      Sentinels       ['Jett', 'Reyna', 'Raze']    9
## 2     ScreaM        Belgium    Team Liquid             ['Sage', 'Phoenix']    9
## 3    ShahZaM  United States      Sentinels                ['Sova', 'Jett']    9
## 4       L1NK United Kingdom    Team Liquid           ['Brimstone', 'Omen']    9
## 5     Jamppi        Finland    Team Liquid             ['Jett', 'Killjoy']    9
## 6      Lakia    South Korea  NUTURN Gaming                ['Sova', 'Raze']   11
## 7       SicK  United States      Sentinels     ['Phoenix', 'Raze', 'Sova']    9
## 8     Mistic United Kingdom         Fnatic               ['Viper', 'Skye']   16
## 9      Klaus      Argentina    KRÜ Esports             ['Killjoy', 'Skye']    6
## 10      Sacy         Brazil   Team Vikings                         ['Sova']    6
## 11  Patiphan       Thailand    X10 Esports       ['Jett', 'Viper', 'Sage']    6
## 12     Derke        Finland         Fnatic                ['Jett', 'Sova']   16
## 13     Effys         Canada       Version1                ['Sova', 'Sage']   10
## 14    Magnum Czech Republic         Fnatic   ['Killjoy', 'Cypher', 'Skye']   16
## 15   Zellsis  United States       Version1         ['Killjoy', 'Phoenix']   10
## 16     Penny         Canada       Version1                        ['Jett']   10
## 17      Peri    South Korea  NUTURN Gaming               ['Omen', 'Astra']   11
## 18      Neth          Japan  Crazy Raccoon                     ['Killjoy']    4
## 19      Dapr  United States      Sentinels     ['Cypher', 'Viper', 'Sage']    9
## 20      Doma        Croatia         Fnatic        ['Sage', 'Omen', 'Raze']   16
## 21    SScary       Thailand    X10 Esports              ['Astra', 'Viper']    6
## 22   Boaster United Kingdom         Fnatic       ['Astra', 'Sova', 'Skye']   16
## 23      Foxz       Thailand    X10 Esports                ['Sova', 'Jett']    6
## 24   Soulcas United Kingdom    Team Liquid                ['Skye', 'Sova']    9
## 25    Gaabxx         Brazil Sharks Esports       ['Viper', 'Raze', 'Jett']    5
## 26    Mazino          Chile    KRÜ Esports                ['Viper', 'Sage']    6
## 27    Prozin         Brazil Sharks Esports             ['Raze', 'Phoenix']    5
## 28    Zepher          Japan  Crazy Raccoon                         ['Jett']    4
## 29   Suggest    South Korea  NUTURN Gaming      ['Raze', 'Skye', 'Breach']   11
## 30     Allow    South Korea  NUTURN Gaming                         ['Jett']   11
## 31     Zombs  United States      Sentinels              ['Astra', 'Viper']    9
## 32    Vanity  United States       Version1               ['Astra', 'Omen']   10
## 33   Sutecas         Brazil   Team Vikings               ['Omen', 'Astra']    6
## 34   Kryptix United Kingdom    Team Liquid            ['Viper', 'Killjoy']    9
## 35   Saadhak      Argentina   Team Vikings           ['Killjoy', 'Cypher']    6
## 36      Crws       Thailand    X10 Esports              ['Skye', 'Breach']    6
## 37  Munchkin    South Korea  Crazy Raccoon     ['Raze', 'Phoenix', 'Sage']    4
## 38    Delz1k          Chile    KRÜ Esports   ['Sage', 'Omen', 'Brimstone']    6
## 39      NagZ          Chile    KRÜ Esports                ['Jett', 'Sage']    6
## 40      Solo    South Korea  NUTURN Gaming ['Breach', 'Killjoy', 'Cypher']   11
## 41    Jammyz  United States       Version1            ['Viper', 'Killjoy']   10
## 42 Sushiboys       Thailand    X10 Esports           ['Killjoy', 'Cypher']    6
## 43       Bnj      Argentina    KRÜ Esports        ['Sova', 'Raze', 'Skye']    6
## 44       Frz         Brazil   Team Vikings             ['Jett', 'Phoenix']    6
## 45    Medusa    South Korea  Crazy Raccoon                         ['Sova']    4
## 46      Rion          Japan  Crazy Raccoon      ['Astra', 'Viper', 'Omen']    4
## 47    DeNaro         Brazil Sharks Esports                         ['Sova']    5
## 48    GtnziN         Brazil   Team Vikings                ['Raze', 'Yoru']    6
## 49     Light         Brazil Sharks Esports           ['Omen', 'Brimstone']    5
## 50       Fra         Brazil Sharks Esports     ['Killjoy', 'Skye', 'Sage']    5
##      K   D   A   KD  KDA ACS.Map K.Map D.Map A.Map
## 1  206 139  55 1.48 1.87     289  22.8  15.4   6.1
## 2  177 131  56 1.35 1.77     265  19.6  14.5   6.2
## 3  172 134  52 1.28 1.67     240  19.1  14.8   5.7
```

```
## 4  147 123  57 1.19 1.65     218  16.3  13.6   6.3
## 5  155 130  32 1.19 1.43     229  17.2  14.4   3.5
## 6  174 146  62 1.19 1.61     231  15.8  13.2   5.6
## 7  147 126  61 1.16 1.65     218  16.3  14.0   6.7
## 8  240 206 120 1.16 1.74     191  15.0  12.8   7.5
## 9   87  75  25 1.15 1.49     234  14.5  12.5   4.1
## 10 100  89  30 1.12 1.46     206  16.6  14.8   5.0
## 11 109  98  38 1.11 1.50     235  18.1  16.3   6.3
## 12 298 270  85 1.10 1.41     260  18.6  16.8   5.3
## 13 161 146  69 1.10 1.57     186  16.1  14.6   6.9
## 14 270 246  83 1.09 1.43     215  16.8  15.3   5.1
## 15 184 168  61 1.09 1.45     230  18.4  16.8   6.1
## 16 185 173  40 1.06 1.30     227  18.5  17.3   4.0
## 17 151 142  43 1.06 1.36     184  13.7  12.9   3.9
## 18  63  61  15 1.03 1.27     203  15.7  15.2   3.7
## 19 127 123  73 1.03 1.62     184  14.1  13.6   8.1
## 20 247 241 120 1.02 1.52     205  15.4  15.0   7.5
## 21  88  87  35 1.01 1.41     157  14.6  14.5   5.8
## 22 241 241  81 1.00 1.33     190  15.0  15.0   5.0
## 23 100 100  33 1.00 1.33     206  16.6  16.6   5.5
## 24 124 124  64 1.00 1.51     188  13.7  13.7   7.1
## 25  65  66  17 0.98 1.24     199  13.0  13.2   3.4
## 26  78  80  46 0.97 1.55     213  13.0  13.3   7.6
## 27  70  75  15 0.93 1.13     237  14.0  15.0   3.0
## 28  62  67  10 0.92 1.07     202  15.5  16.7   2.5
## 29 146 158  36 0.92 1.15     186  13.2  14.3   3.2
## 30 150 163  30 0.92 1.10     198  13.6  14.8   2.7
## 31 121 133  67 0.90 1.41     170  13.4  14.7   7.4
## 32 158 174  63 0.90 1.27     197  15.8  17.4   6.3
## 33  88  98  26 0.89 1.16     174  14.6  16.3   4.3
## 34 104 117  54 0.88 1.35     161  11.5  13.0   6.0
## 35  81  92  26 0.88 1.16     166  13.5  15.3   4.3
## 36  81  93  34 0.87 1.23     171  13.5  15.5   5.6
## 37  62  72  27 0.86 1.23     210  15.5  18.0   6.7
## 38  62  73  22 0.84 1.15     157  10.3  12.1   3.6
## 39  67  81  13 0.82 0.98     169  11.1  13.5   2.1
## 40 137 167  65 0.82 1.20     188  12.4  15.1   5.9
## 41 136 169  56 0.80 1.13     176  13.6  16.9   5.6
## 42  74  92  28 0.80 1.10     161  12.3  15.3   4.6
## 43  60  79  38 0.75 1.24     173  10.0  13.1   6.3
## 44  75 100  24 0.75 0.99     139  12.5  16.6   4.0
## 45  51  70  23 0.72 1.05     178  12.7  17.5   5.7
## 46  46  67  16 0.68 0.92     148  11.5  16.7   4.0
## 47  45  69  24 0.65 1.00     161   9.0  13.8   4.8
## 48  60  96  28 0.62 0.91     141  10.0  16.0   4.6
## 49  35  67  22 0.52 0.85     125   7.0  13.4   4.4
## 50  35  69  17 0.50 0.75     122   7.0  13.8   3.4
```

```
df1$Map
```

```
## [1] "Ascent" "Bind"   "Haven"  "Icebox" "Split"
```

```
df1$Total
```

```
## [1]  2  9  3  8 12
```

```
df1$Day1
```

```
## NULL
```

```
df1$Day2
```

```
## NULL
```

```
df1$Day3
```

```
## NULL
```

```
df1$Day4
```

```
## NULL
```

```
df1$Day5
```

```
## NULL
```

```
df1$Day6
```

```
## NULL
```

```
df1$Day7
```

```
## NULL
```

```
df2$Map
```

```
## [1] "Ascent" "Bind"   "Haven"  "Icebox" "Split"
```

```
df2$AtkWins
```

```
## NULL
```

```
df2$DefWins
```

```
## NULL
```

```
df3$Map
```

```
## [1] "Ascent" "Bind"   "Haven"  "Icebox" "Split"
```

```
df3$Total
```

```
## [1] 16  9 15 10  6
```

```
df3$Day1
```

```
## NULL
```

```
df3$Day2
```

```
## NULL
```

```
df3$Day3
```

```
## NULL
```

```
df3$Day4
```

```
## NULL
```

```
df3$Day5
```

```
## NULL
```

```
df3$Day6
```

```
## NULL
```

```
df3$Day7
```

```
## NULL
```

```
df4$Player
```

```
##  [1] "TenZ"      "ScreaM"    "ShahZaM"   "L1NK"      "Jamppi"    "Lakia"
##  [7] "SicK"      "Mistic"    "Klaus"     "Sacy"      "Patiphan"  "Derke"
## [13] "Effys"     "Magnum"    "Zellsis"   "Penny"     "Peri"      "Neth"
## [19] "Dapr"      "Doma"      "SScary"    "Boaster"   "Foxz"      "Soulcas"
## [25] "Gaabxx"    "Mazino"    "Prozin"    "Zepher"    "Suggest"   "Allow"
## [31] "Zombs"     "Vanity"    "Sutecas"   "Kryptix"   "Saadhak"   "Crws"
## [37] "Munchkin"  "Delz1k"    "NagZ"      "Solo"      "Jammyz"    "Sushiboys"
## [43] "Bnj"       "Frz"       "Medusa"    "Rion"      "DeNaro"    "GtnziN"
## [49] "Light"     "Fra"
```

```
df4$Country
```

```
##  [1] "Canada"         "Belgium"        "United States"  "United Kingdom"
##  [5] "Finland"        "South Korea"    "United States"  "United Kingdom"
##  [9] "Argentina"      "Brazil"         "Thailand"       "Finland"
## [13] "Canada"         "Czech Republic" "United States"  "Canada"
## [17] "South Korea"    "Japan"          "United States"  "Croatia"
## [21] "Thailand"       "United Kingdom" "Thailand"       "United Kingdom"
## [25] "Brazil"         "Chile"          "Brazil"         "Japan"
## [29] "South Korea"    "South Korea"    "United States"  "United States"
## [33] "Brazil"         "United Kingdom" "Argentina"      "Thailand"
## [37] "South Korea"    "Chile"          "Chile"          "South Korea"
## [41] "United States"  "Thailand"       "Argentina"      "Brazil"
## [45] "South Korea"    "Japan"          "Brazil"         "Brazil"
## [49] "Brazil"         "Brazil"
```

```
df4$Team
```

```
##  [1] "Sentinels"      "Team Liquid"    "Sentinels"      "Team Liquid"
##  [5] "Team Liquid"    "NUTURN Gaming"  "Sentinels"      "Fnatic"
##  [9] "KRÜ Esports"    "Team Vikings"   "X10 Esports"    "Fnatic"
## [13] "Version1"       "Fnatic"         "Version1"       "Version1"
## [17] "NUTURN Gaming"  "Crazy Raccoon"  "Sentinels"      "Fnatic"
## [21] "X10 Esports"    "Fnatic"         "X10 Esports"    "Team Liquid"
## [25] "Sharks Esports" "KRÜ Esports"    "Sharks Esports" "Crazy Raccoon"
## [29] "NUTURN Gaming"  "NUTURN Gaming"  "Sentinels"      "Version1"
## [33] "Team Vikings"   "Team Liquid"    "Team Vikings"   "X10 Esports"
## [37] "Crazy Raccoon"  "KRÜ Esports"    "KRÜ Esports"    "NUTURN Gaming"
## [41] "Version1"       "X10 Esports"    "KRÜ Esports"    "Team Vikings"
## [45] "Crazy Raccoon"  "Crazy Raccoon"  "Sharks Esports" "Team Vikings"
## [49] "Sharks Esports" "Sharks Esports"
```

```
df4$Agents
```

```
##  [1] "['Jett', 'Reyna', 'Raze']"       "['Sage', 'Phoenix']"
##  [3] "['Sova', 'Jett']"                "['Brimstone', 'Omen']"
##  [5] "['Jett', 'Killjoy']"             "['Sova', 'Raze']"
##  [7] "['Phoenix', 'Raze', 'Sova']"     "['Viper', 'Skye']"
##  [9] "['Killjoy', 'Skye']"             "['Sova']"
## [11] "['Jett', 'Viper', 'Sage']"       "['Jett', 'Sova']"
## [13] "['Sova', 'Sage']"                "['Killjoy', 'Cypher', 'Skye']"
## [15] "['Killjoy', 'Phoenix']"          "['Jett']"
## [17] "['Omen', 'Astra']"               "['Killjoy']"
## [19] "['Cypher', 'Viper', 'Sage']"     "['Sage', 'Omen', 'Raze']"
## [21] "['Astra', 'Viper']"              "['Astra', 'Sova', 'Skye']"
## [23] "['Sova', 'Jett']"                "['Skye', 'Sova']"
## [25] "['Viper', 'Raze', 'Jett']"       "['Viper', 'Sage']"
## [27] "['Raze', 'Phoenix']"             "['Jett']"
## [29] "['Raze', 'Skye', 'Breach']"      "['Jett']"
## [31] "['Astra', 'Viper']"              "['Astra', 'Omen']"
## [33] "['Omen', 'Astra']"               "['Viper', 'Killjoy']"
## [35] "['Killjoy', 'Cypher']"           "['Skye', 'Breach']"
## [37] "['Raze', 'Phoenix', 'Sage']"     "['Sage', 'Omen', 'Brimstone']"
## [39] "['Jett', 'Sage']"                "['Breach', 'Killjoy', 'Cypher']"
## [41] "['Viper', 'Killjoy']"            "['Killjoy', 'Cypher']"
## [43] "['Sova', 'Raze', 'Skye']"        "['Jett', 'Phoenix']"
## [45] "['Sova']"                        "['Astra', 'Viper', 'Omen']"
## [47] "['Sova']"                        "['Raze', 'Yoru']"
## [49] "['Omen', 'Brimstone']"           "['Killjoy', 'Skye', 'Sage']"
```

```
df4$Maps
```

```
##  [1]  9  9  9  9  9 11  9 16  6  6  6 16 10 16 10 10 11  4  9 16  6 16  6  9  5
## [26]  6  5  4 11 11  9 10  6  9  6  6  4  6  6 11 10  6  6  6  4  4  5  6  5  5
```

```
df4$K
```

```
##  [1] 206 177 172 147 155 174 147 240  87 100 109 298 161 270 184 185 151  63 127
## [20] 247  88 241 100 124  65  78  70  62 146 150 121 158  88 104  81  81  62  62
## [39]  67 137 136  74  60  75  51  46  45  60  35  35
```

```
df4$D
```

```
##  [1] 139 131 134 123 130 146 126 206  75  89  98 270 146 246 168 173 142  61 123
## [20] 241  87 241 100 124  66  80  75  67 158 163 133 174  98 117  92  93  72  73
## [39]  81 167 169  92  79 100  70  67  69  96  67  69
```

```
df4$A
```

```
##  [1]  55  56  52  57  32  62  61 120  25  30  38  85  69  83  61  40  43  15  73
## [20] 120  35  81  33  64  17  46  15  10  36  30  67  63  26  54  26  34  27  22
## [39]  13  65  56  28  38  24  23  16  24  28  22  17
```

```
df4$KD
```

```
##  [1] 1.48 1.35 1.28 1.19 1.19 1.19 1.16 1.16 1.15 1.12 1.11 1.10 1.10 1.09 1.09
## [16] 1.06 1.06 1.03 1.03 1.02 1.01 1.00 1.00 1.00 0.98 0.97 0.93 0.92 0.92 0.92
## [31] 0.90 0.90 0.89 0.88 0.88 0.87 0.86 0.84 0.82 0.82 0.80 0.80 0.75 0.75 0.72
## [46] 0.68 0.65 0.62 0.52 0.50
```

```
df4$KDA
```

```
##  [1] 1.87 1.77 1.67 1.65 1.43 1.61 1.65 1.74 1.49 1.46 1.50 1.41 1.57 1.43 1.45
## [16] 1.30 1.36 1.27 1.62 1.52 1.41 1.33 1.33 1.51 1.24 1.55 1.13 1.07 1.15 1.10
## [31] 1.41 1.27 1.16 1.35 1.16 1.23 1.23 1.15 0.98 1.20 1.13 1.10 1.24 0.99 1.05
## [46] 0.92 1.00 0.91 0.85 0.75
```

```
data.frame(df1)
```

```
##      Map Total Day.1 Day.2 Day.3 Day.4 Day.5 Day.6 Day.7
## 1 Ascent     2     0     0     1     0     1     0     0
## 2   Bind     9     2     3     1     2     1     0     0
## 3  Haven     3     0     0     1     1     0     1     0
## 4 Icebox     8     1     1     0     2     2     2     0
## 5  Split    12     3     2     3     1     2     1     0
```

```
data.frame(df2)
```

```
##      Map Atk.Wins Def.Wins
## 1 Ascent       96      130
## 2   Bind       74       55
## 3  Haven      130      105
## 4 Icebox       99       88
## 5  Split       44       53
```

```
data.frame(df3)
```

```
##      Map Total Day.1 Day.2 Day.3 Day.4 Day.5 Day.6 Day.7
## 1 Ascent    16     3     3     2     3     2     2     1
## 2   Bind     9     1     0     2     1     2     2     1
## 3  Haven    15     3     3     2     2     3     1     1
## 4 Icebox    10     2     2     3     1     1     0     1
## 5  Split     6     0     1     0     2     1     1     1
```

```
data.frame(df4)
```

```
##       Player        Country           Team                          Agents Maps
## 1       TenZ         Canada      Sentinels       ['Jett', 'Reyna', 'Raze']    9
## 2     ScreaM        Belgium    Team Liquid             ['Sage', 'Phoenix']    9
## 3    ShahZaM  United States      Sentinels                ['Sova', 'Jett']    9
## 4       L1NK United Kingdom    Team Liquid           ['Brimstone', 'Omen']    9
## 5     Jamppi        Finland    Team Liquid             ['Jett', 'Killjoy']    9
## 6      Lakia    South Korea  NUTURN Gaming                ['Sova', 'Raze']   11
## 7       SicK  United States      Sentinels     ['Phoenix', 'Raze', 'Sova']    9
## 8     Mistic United Kingdom         Fnatic               ['Viper', 'Skye']   16
## 9      Klaus      Argentina    KRÜ Esports             ['Killjoy', 'Skye']    6
## 10      Sacy         Brazil   Team Vikings                         ['Sova']    6
## 11  Patiphan       Thailand    X10 Esports       ['Jett', 'Viper', 'Sage']    6
## 12     Derke        Finland         Fnatic                ['Jett', 'Sova']   16
## 13     Effys         Canada       Version1                ['Sova', 'Sage']   10
## 14    Magnum Czech Republic         Fnatic   ['Killjoy', 'Cypher', 'Skye']   16
## 15   Zellsis  United States       Version1          ['Killjoy', 'Phoenix']   10
## 16     Penny         Canada       Version1                        ['Jett']   10
## 17      Peri    South Korea  NUTURN Gaming               ['Omen', 'Astra']   11
## 18      Neth          Japan  Crazy Raccoon                     ['Killjoy']    4
## 19      Dapr  United States      Sentinels     ['Cypher', 'Viper', 'Sage']    9
## 20      Doma        Croatia         Fnatic        ['Sage', 'Omen', 'Raze']   16
## 21    SScary       Thailand    X10 Esports              ['Astra', 'Viper']    6
## 22   Boaster United Kingdom         Fnatic       ['Astra', 'Sova', 'Skye']   16
## 23      Foxz       Thailand    X10 Esports                ['Sova', 'Jett']    6
## 24   Soulcas United Kingdom    Team Liquid                ['Skye', 'Sova']    9
## 25    Gaabxx         Brazil Sharks Esports       ['Viper', 'Raze', 'Jett']    5
## 26    Mazino          Chile    KRÜ Esports                ['Viper', 'Sage']    6
## 27    Prozin         Brazil Sharks Esports             ['Raze', 'Phoenix']    5
## 28    Zepher          Japan  Crazy Raccoon                         ['Jett']    4
## 29   Suggest    South Korea  NUTURN Gaming      ['Raze', 'Skye', 'Breach']   11
## 30     Allow    South Korea  NUTURN Gaming                         ['Jett']   11
## 31     Zombs  United States      Sentinels              ['Astra', 'Viper']    9
## 32    Vanity  United States       Version1               ['Astra', 'Omen']   10
## 33   Sutecas         Brazil   Team Vikings               ['Omen', 'Astra']    6
## 34   Kryptix United Kingdom    Team Liquid            ['Viper', 'Killjoy']    9
## 35   Saadhak      Argentina   Team Vikings           ['Killjoy', 'Cypher']    6
## 36      Crws       Thailand    X10 Esports              ['Skye', 'Breach']    6
## 37  Munchkin    South Korea  Crazy Raccoon     ['Raze', 'Phoenix', 'Sage']    4
## 38    Delz1k          Chile    KRÜ Esports   ['Sage', 'Omen', 'Brimstone']    6
## 39      NagZ          Chile    KRÜ Esports                ['Jett', 'Sage']    6
## 40      Solo    South Korea  NUTURN Gaming ['Breach', 'Killjoy', 'Cypher']   11
## 41    Jammyz  United States       Version1            ['Viper', 'Killjoy']   10
## 42 Sushiboys       Thailand    X10 Esports           ['Killjoy', 'Cypher']    6
## 43       Bnj      Argentina    KRÜ Esports        ['Sova', 'Raze', 'Skye']    6
## 44       Frz         Brazil   Team Vikings             ['Jett', 'Phoenix']    6
## 45    Medusa    South Korea  Crazy Raccoon                         ['Sova']    4
## 46      Rion          Japan  Crazy Raccoon      ['Astra', 'Viper', 'Omen']    4
## 47    DeNaro         Brazil Sharks Esports                         ['Sova']    5
## 48    GtnziN         Brazil   Team Vikings                ['Raze', 'Yoru']    6
## 49     Light         Brazil Sharks Esports           ['Omen', 'Brimstone']    5
## 50       Fra         Brazil Sharks Esports     ['Killjoy', 'Skye', 'Sage']    5
##      K   D   A   KD  KDA ACS.Map K.Map D.Map A.Map
## 1  206 139  55 1.48 1.87     289  22.8  15.4   6.1
## 2  177 131  56 1.35 1.77     265  19.6  14.5   6.2
## 3  172 134  52 1.28 1.67     240  19.1  14.8   5.7
```

```
## 4  147 123  57 1.19 1.65     218  16.3  13.6   6.3
## 5  155 130  32 1.19 1.43     229  17.2  14.4   3.5
## 6  174 146  62 1.19 1.61     231  15.8  13.2   5.6
## 7  147 126  61 1.16 1.65     218  16.3  14.0   6.7
## 8  240 206 120 1.16 1.74     191  15.0  12.8   7.5
## 9   87  75  25 1.15 1.49     234  14.5  12.5   4.1
## 10 100  89  30 1.12 1.46     206  16.6  14.8   5.0
## 11 109  98  38 1.11 1.50     235  18.1  16.3   6.3
## 12 298 270  85 1.10 1.41     260  18.6  16.8   5.3
## 13 161 146  69 1.10 1.57     186  16.1  14.6   6.9
## 14 270 246  83 1.09 1.43     215  16.8  15.3   5.1
## 15 184 168  61 1.09 1.45     230  18.4  16.8   6.1
## 16 185 173  40 1.06 1.30     227  18.5  17.3   4.0
## 17 151 142  43 1.06 1.36     184  13.7  12.9   3.9
## 18  63  61  15 1.03 1.27     203  15.7  15.2   3.7
## 19 127 123  73 1.03 1.62     184  14.1  13.6   8.1
## 20 247 241 120 1.02 1.52     205  15.4  15.0   7.5
## 21  88  87  35 1.01 1.41     157  14.6  14.5   5.8
## 22 241 241  81 1.00 1.33     190  15.0  15.0   5.0
## 23 100 100  33 1.00 1.33     206  16.6  16.6   5.5
## 24 124 124  64 1.00 1.51     188  13.7  13.7   7.1
## 25  65  66  17 0.98 1.24     199  13.0  13.2   3.4
## 26  78  80  46 0.97 1.55     213  13.0  13.3   7.6
## 27  70  75  15 0.93 1.13     237  14.0  15.0   3.0
## 28  62  67  10 0.92 1.07     202  15.5  16.7   2.5
## 29 146 158  36 0.92 1.15     186  13.2  14.3   3.2
## 30 150 163  30 0.92 1.10     198  13.6  14.8   2.7
## 31 121 133  67 0.90 1.41     170  13.4  14.7   7.4
## 32 158 174  63 0.90 1.27     197  15.8  17.4   6.3
## 33  88  98  26 0.89 1.16     174  14.6  16.3   4.3
## 34 104 117  54 0.88 1.35     161  11.5  13.0   6.0
## 35  81  92  26 0.88 1.16     166  13.5  15.3   4.3
## 36  81  93  34 0.87 1.23     171  13.5  15.5   5.6
## 37  62  72  27 0.86 1.23     210  15.5  18.0   6.7
## 38  62  73  22 0.84 1.15     157  10.3  12.1   3.6
## 39  67  81  13 0.82 0.98     169  11.1  13.5   2.1
## 40 137 167  65 0.82 1.20     188  12.4  15.1   5.9
## 41 136 169  56 0.80 1.13     176  13.6  16.9   5.6
## 42  74  92  28 0.80 1.10     161  12.3  15.3   4.6
## 43  60  79  38 0.75 1.24     173  10.0  13.1   6.3
## 44  75 100  24 0.75 0.99     139  12.5  16.6   4.0
## 45  51  70  23 0.72 1.05     178  12.7  17.5   5.7
## 46  46  67  16 0.68 0.92     148  11.5  16.7   4.0
## 47  45  69  24 0.65 1.00     161   9.0  13.8   4.8
## 48  60  96  28 0.62 0.91     141  10.0  16.0   4.6
## 49  35  67  22 0.52 0.85     125   7.0  13.4   4.4
## 50  35  69  17 0.50 0.75     122   7.0  13.8   3.4
```

```
View(df1)
```

```
View(df2)
```

```
View(df3)
```

```
View(df4)
```

```
names(df1)
```

```
## [1] "Map"   "Total" "Day.1" "Day.2" "Day.3" "Day.4" "Day.5" "Day.6" "Day.7"
```

```
names(df2)
```

```
## [1] "Map"      "Atk.Wins" "Def.Wins"
```

```
names(df3)
```

```
## [1] "Map"   "Total" "Day.1" "Day.2" "Day.3" "Day.4" "Day.5" "Day.6" "Day.7"
```

```
names(df4)
```

```
##  [1] "Player"  "Country" "Team"    "Agents"  "Maps"    "K"       "D"
##  [8] "A"       "KD"      "KDA"     "ACS.Map" "K.Map"   "D.Map"   "A.Map"
```

```
row.names(df1)
```

```
## [1] "1" "2" "3" "4" "5"
```

```
row.names(df2)
```

```
## [1] "1" "2" "3" "4" "5"
```

```
row.names(df3)
```

```
## [1] "1" "2" "3" "4" "5"
```

```
row.names(df4)
```

```
##  [1] "1"  "2"  "3"  "4"  "5"  "6"  "7"  "8"  "9"  "10" "11" "12" "13" "14" "15"
## [16] "16" "17" "18" "19" "20" "21" "22" "23" "24" "25" "26" "27" "28" "29" "30"
## [31] "31" "32" "33" "34" "35" "36" "37" "38" "39" "40" "41" "42" "43" "44" "45"
## [46] "46" "47" "48" "49" "50"
```

```
colnames(df1)
```

```
## [1] "Map"   "Total" "Day.1" "Day.2" "Day.3" "Day.4" "Day.5" "Day.6" "Day.7"
```

```
colnames(df2)
```

```
## [1] "Map"      "Atk.Wins" "Def.Wins"
```

```
colnames(df3)
```

```
## [1] "Map"   "Total" "Day.1" "Day.2" "Day.3" "Day.4" "Day.5" "Day.6" "Day.7"
```

```
colnames(df4)
```

```
##  [1] "Player"  "Country" "Team"    "Agents"  "Maps"    "K"       "D"
##  [8] "A"       "KD"      "KDA"     "ACS.Map" "K.Map"   "D.Map"   "A.Map"
```

```
length(df1)
```

```
## [1] 9
```

```
length(df2)
```

```
## [1] 3
```

```
length(df3)
```

```
## [1] 9
```

```
length(df4)
```

```
## [1] 14
```

```
str(df1)
```

```
## 'data.frame':    5 obs. of  9 variables:
##  $ Map  : chr  "Ascent" "Bind" "Haven" "Icebox" ...
##  $ Total: int  2 9 3 8 12
##  $ Day.1: int  0 2 0 1 3
##  $ Day.2: int  0 3 0 1 2
##  $ Day.3: int  1 1 1 0 3
##  $ Day.4: int  0 2 1 2 1
##  $ Day.5: int  1 1 0 2 2
##  $ Day.6: int  0 0 1 2 1
##  $ Day.7: int  0 0 0 0 0
```

```
str(df2)
```

```
## 'data.frame':    5 obs. of  3 variables:
##  $ Map     : chr  "Ascent" "Bind" "Haven" "Icebox" ...
##  $ Atk.Wins: int  96 74 130 99 44
##  $ Def.Wins: int  130 55 105 88 53
```

```
str(df3)
```

```
## 'data.frame':    5 obs. of  9 variables:
##  $ Map  : chr  "Ascent" "Bind" "Haven" "Icebox" ...
##  $ Total: int  16 9 15 10 6
##  $ Day.1: int  3 1 3 2 0
##  $ Day.2: int  3 0 3 2 1
##  $ Day.3: int  2 2 2 3 0
##  $ Day.4: int  3 1 2 1 2
##  $ Day.5: int  2 2 3 1 1
##  $ Day.6: int  2 2 1 0 1
##  $ Day.7: int  1 1 1 1 1
```

```
str(df4)
```

```
## 'data.frame':    50 obs. of  14 variables:
##  $ Player : chr  "TenZ" "ScreaM" "ShahZaM" "L1NK" ...
##  $ Country: chr  "Canada" "Belgium" "United States" "United Kingdom" ...
##  $ Team   : chr  "Sentinels" "Team Liquid" "Sentinels" "Team Liquid" ...
##  $ Agents : chr  "['Jett', 'Reyna', 'Raze']" "['Sage', 'Phoenix']" "['Sova', 'Jett']" "['B
rimstone', 'Omen']" ...
##  $ Maps   : int  9 9 9 9 9 11 9 16 6 6 ...
##  $ K      : int  206 177 172 147 155 174 147 240 87 100 ...
##  $ D      : int  139 131 134 123 130 146 126 206 75 89 ...
##  $ A      : int  55 56 52 57 32 62 61 120 25 30 ...
##  $ KD     : num  1.48 1.35 1.28 1.19 1.19 1.19 1.16 1.16 1.15 1.12 ...
##  $ KDA    : num  1.87 1.77 1.67 1.65 1.43 1.61 1.65 1.74 1.49 1.46 ...
##  $ ACS.Map: int  289 265 240 218 229 231 218 191 234 206 ...
##  $ K.Map  : num  22.8 19.6 19.1 16.3 17.2 15.8 16.3 15 14.5 16.6 ...
##  $ D.Map  : num  15.4 14.5 14.8 13.6 14.4 13.2 14 12.8 12.5 14.8 ...
##  $ A.Map  : num  6.1 6.2 5.7 6.3 3.5 5.6 6.7 7.5 4.1 5 ...
```

```
ls(df1)
```

```
## [1] "Day.1" "Day.2" "Day.3" "Day.4" "Day.5" "Day.6" "Day.7" "Map"   "Total"
```

```
ls(df2)
```

```
## [1] "Atk.Wins" "Def.Wins" "Map"
```

```
ls(df3)
```

```
## [1] "Day.1" "Day.2" "Day.3" "Day.4" "Day.5" "Day.6" "Day.7" "Map"   "Total"
```

```
ls(df4)
```

```
##  [1] "A"       "A.Map"   "ACS.Map" "Agents"  "Country" "D"       "D.Map"
##  [8] "K"       "K.Map"   "KD"      "KDA"     "Maps"    "Player"  "Team"
```

```
ls.str(df1)
```

```
## Day.1 :  int [1:5] 0 2 0 1 3
## Day.2 :  int [1:5] 0 3 0 1 2
## Day.3 :  int [1:5] 1 1 1 0 3
## Day.4 :  int [1:5] 0 2 1 2 1
## Day.5 :  int [1:5] 1 1 0 2 2
## Day.6 :  int [1:5] 0 0 1 2 1
## Day.7 :  int [1:5] 0 0 0 0 0
## Map :  chr [1:5] "Ascent" "Bind" "Haven" "Icebox" "Split"
## Total :  int [1:5] 2 9 3 8 12
```

```
ls.str(df2)
```

```
## Atk.Wins :  int [1:5] 96 74 130 99 44
## Def.Wins :  int [1:5] 130 55 105 88 53
## Map :  chr [1:5] "Ascent" "Bind" "Haven" "Icebox" "Split"
```

```
ls.str(df3)
```

```
## Day.1 :  int [1:5] 3 1 3 2 0
## Day.2 :  int [1:5] 3 0 3 2 1
## Day.3 :  int [1:5] 2 2 2 3 0
## Day.4 :  int [1:5] 3 1 2 1 2
## Day.5 :  int [1:5] 2 2 3 1 1
## Day.6 :  int [1:5] 2 2 1 0 1
## Day.7 :  int [1:5] 1 1 1 1 1
## Map :  chr [1:5] "Ascent" "Bind" "Haven" "Icebox" "Split"
## Total :  int [1:5] 16 9 15 10 6
```

```
ls.str(df4)
```

```
## A :  int [1:50] 55 56 52 57 32 62 61 120 25 30 ...
## A.Map :  num [1:50] 6.1 6.2 5.7 6.3 3.5 5.6 6.7 7.5 4.1 5 ...
## ACS.Map :  int [1:50] 289 265 240 218 229 231 218 191 234 206 ...
## Agents :  chr [1:50] "['Jett', 'Reyna', 'Raze']" "['Sage', 'Phoenix']" ...
## Country :  chr [1:50] "Canada" "Belgium" "United States" "United Kingdom" "Finland" ...
## D :  int [1:50] 139 131 134 123 130 146 126 206 75 89 ...
## D.Map :  num [1:50] 15.4 14.5 14.8 13.6 14.4 13.2 14 12.8 12.5 14.8 ...
## K :  int [1:50] 206 177 172 147 155 174 147 240 87 100 ...
## K.Map :  num [1:50] 22.8 19.6 19.1 16.3 17.2 15.8 16.3 15 14.5 16.6 ...
## KD :  num [1:50] 1.48 1.35 1.28 1.19 1.19 1.19 1.16 1.16 1.15 1.12 ...
## KDA :  num [1:50] 1.87 1.77 1.67 1.65 1.43 1.61 1.65 1.74 1.49 1.46 ...
## Maps :  int [1:50] 9 9 9 9 9 11 9 16 6 6 ...
## Player :  chr [1:50] "TenZ" "ScreaM" "ShahZaM" "L1NK" "Jamppi" "Lakia" "SicK" ...
## Team :  chr [1:50] "Sentinels" "Team Liquid" "Sentinels" "Team Liquid" ...
```

```
ls.str(pattern = 'df1')
```

```
## df1 : 'data.frame':  5 obs. of  9 variables:
##  $ Map  : chr  "Ascent" "Bind" "Haven" "Icebox" ...
##  $ Total: int  2 9 3 8 12
##  $ Day.1: int  0 2 0 1 3
##  $ Day.2: int  0 3 0 1 2
##  $ Day.3: int  1 1 1 0 3
##  $ Day.4: int  0 2 1 2 1
##  $ Day.5: int  1 1 0 2 2
##  $ Day.6: int  0 0 1 2 1
##  $ Day.7: int  0 0 0 0 0
```

```
ls.str(pattern = 'df2')
```

```
## df2 : 'data.frame':  5 obs. of  3 variables:
##  $ Map     : chr  "Ascent" "Bind" "Haven" "Icebox" ...
##  $ Atk.Wins: int  96 74 130 99 44
##  $ Def.Wins: int  130 55 105 88 53
```

```
ls.str(pattern = 'df3')
```

```
## df3 : 'data.frame':  5 obs. of  9 variables:
##  $ Map  : chr  "Ascent" "Bind" "Haven" "Icebox" ...
##  $ Total: int  16 9 15 10 6
##  $ Day.1: int  3 1 3 2 0
##  $ Day.2: int  3 0 3 2 1
##  $ Day.3: int  2 2 2 3 0
##  $ Day.4: int  3 1 2 1 2
##  $ Day.5: int  2 2 3 1 1
##  $ Day.6: int  2 2 1 0 1
##  $ Day.7: int  1 1 1 1 1
```

```
ls.str(pattern = 'df4')
```

```
## df4 : 'data.frame':  50 obs. of  14 variables:
##  $ Player : chr  "TenZ" "ScreaM" "ShahZaM" "L1NK" ...
##  $ Country: chr  "Canada" "Belgium" "United States" "United Kingdom" ...
##  $ Team   : chr  "Sentinels" "Team Liquid" "Sentinels" "Team Liquid" ...
##  $ Agents : chr  "['Jett', 'Reyna', 'Raze']" "['Sage', 'Phoenix']" "['Sova', 'Jett']" "['B
rimstone', 'Omen']" ...
##  $ Maps   : int  9 9 9 9 9 11 9 16 6 6 ...
##  $ K      : int  206 177 172 147 155 174 147 240 87 100 ...
##  $ D      : int  139 131 134 123 130 146 126 206 75 89 ...
##  $ A      : int  55 56 52 57 32 62 61 120 25 30 ...
##  $ KD     : num  1.48 1.35 1.28 1.19 1.19 1.19 1.16 1.16 1.15 1.12 ...
##  $ KDA    : num  1.87 1.77 1.67 1.65 1.43 1.61 1.65 1.74 1.49 1.46 ...
##  $ ACS.Map: int  289 265 240 218 229 231 218 191 234 206 ...
##  $ K.Map  : num  22.8 19.6 19.1 16.3 17.2 15.8 16.3 15 14.5 16.6 ...
##  $ D.Map  : num  15.4 14.5 14.8 13.6 14.4 13.2 14 12.8 12.5 14.8 ...
##  $ A.Map  : num  6.1 6.2 5.7 6.3 3.5 5.6 6.7 7.5 4.1 5 ...
```

```
dim(df1)
```

```
## [1] 5 9
```

```
dim(df2)
```

```
## [1] 5 3
```

```
dim(df3)
```

```
## [1] 5 9
```

```
dim(df4)
```

```
## [1] 50 14
```

```
dimnames(df1)
```

```
## [[1]]
## [1] "1" "2" "3" "4" "5"
##
## [[2]]
## [1] "Map"   "Total" "Day.1" "Day.2" "Day.3" "Day.4" "Day.5" "Day.6" "Day.7"
```

```
dimnames(df2)
```

```
## [[1]]
## [1] "1" "2" "3" "4" "5"
##
## [[2]]
## [1] "Map"      "Atk.Wins" "Def.Wins"
```

```
dimnames(df3)
```

```
## [[1]]
## [1] "1" "2" "3" "4" "5"
##
## [[2]]
## [1] "Map"   "Total" "Day.1" "Day.2" "Day.3" "Day.4" "Day.5" "Day.6" "Day.7"
```

```
dimnames(df4)
```

```
## [[1]]
##  [1] "1"  "2"  "3"  "4"  "5"  "6"  "7"  "8"  "9"  "10" "11" "12" "13" "14" "15"
## [16] "16" "17" "18" "19" "20" "21" "22" "23" "24" "25" "26" "27" "28" "29" "30"
## [31] "31" "32" "33" "34" "35" "36" "37" "38" "39" "40" "41" "42" "43" "44" "45"
## [46] "46" "47" "48" "49" "50"
##
## [[2]]
##  [1] "Player"  "Country" "Team"    "Agents"  "Maps"    "K"       "D"
##  [8] "A"       "KD"      "KDA"     "ACS.Map" "K.Map"   "D.Map"   "A.Map"
```

```
head(df1)
```

```
##      Map Total Day.1 Day.2 Day.3 Day.4 Day.5 Day.6 Day.7
## 1 Ascent     2     0     0     1     0     1     0     0
## 2   Bind     9     2     3     1     2     1     0     0
## 3  Haven     3     0     0     1     1     0     1     0
## 4 Icebox     8     1     1     0     2     2     2     0
## 5  Split    12     3     2     3     1     2     1     0
```

```
head(df2)
```

```
##      Map Atk.Wins Def.Wins
## 1 Ascent       96      130
## 2   Bind       74       55
## 3  Haven      130      105
## 4 Icebox       99       88
## 5  Split       44       53
```

```
head(df3)
```

```
##      Map Total Day.1 Day.2 Day.3 Day.4 Day.5 Day.6 Day.7
## 1 Ascent    16     3     3     2     3     2     2     1
## 2   Bind     9     1     0     2     1     2     2     1
## 3  Haven    15     3     3     2     2     3     1     1
## 4 Icebox    10     2     2     3     1     1     0     1
## 5  Split     6     0     1     0     2     1     1     1
```

```
head(df4)
```

```
##    Player        Country          Team                    Agents Maps   K   D
## 1    TenZ         Canada     Sentinels ['Jett', 'Reyna', 'Raze']    9 206 139
## 2  ScreaM        Belgium   Team Liquid       ['Sage', 'Phoenix']    9 177 131
## 3 ShahZaM  United States     Sentinels          ['Sova', 'Jett']    9 172 134
## 4    L1NK United Kingdom   Team Liquid     ['Brimstone', 'Omen']    9 147 123
## 5  Jamppi        Finland   Team Liquid       ['Jett', 'Killjoy']    9 155 130
## 6   Lakia    South Korea NUTURN Gaming          ['Sova', 'Raze']   11 174 146
##    A   KD  KDA ACS.Map K.Map D.Map A.Map
## 1 55 1.48 1.87     289  22.8  15.4   6.1
## 2 56 1.35 1.77     265  19.6  14.5   6.2
## 3 52 1.28 1.67     240  19.1  14.8   5.7
## 4 57 1.19 1.65     218  16.3  13.6   6.3
## 5 32 1.19 1.43     229  17.2  14.4   3.5
## 6 62 1.19 1.61     231  15.8  13.2   5.6
```

```
head(df1$Map)
```

```
## [1] "Ascent" "Bind"   "Haven"  "Icebox" "Split"
```

```
head(df1$Total)
```

```
## [1]  2  9  3  8 12
```

```
head(df1$Day1)
```

```
## NULL
```

```
head(df1$Day2)
```

```
## NULL
```

```
head(df1$Day3)
```

```
## NULL
```

```
head(df1$Day4)
```

```
## NULL
```

```
head(df1$Day5)
```

```
## NULL
```

```
head(df1$Day6)
```

```
## NULL
```

```
head(df1$Day7)
```

```
## NULL
```

```
head(df2$Map)
```

```
## [1] "Ascent" "Bind"   "Haven"  "Icebox" "Split"
```

```
head(df2$AtkWins)
```

```
## NULL
```

```
head(df2$DefWins)
```

```
## NULL
```

```
head(df3$Map)
```

```
## [1] "Ascent" "Bind"   "Haven"  "Icebox" "Split"
```

```
head(df3$Total)
```

```
## [1] 16  9 15 10  6
```

```
head(df3$Day1)
```

```
## NULL
```

```
head(df3$Day2)
```

```
## NULL
```

```
head(df3$Day3)
```

```
## NULL
```

```
head(df3$Day4)
```

```
## NULL
```

```
head(df3$Day5)
```

```
## NULL
```

```
head(df3$Day6)
```

```
## NULL
```

```
head(df3$Day7)
```

```
## NULL
```

```
head(df4$Player)
```

```
## [1] "TenZ"    "ScreaM"  "ShahZaM" "L1NK"    "Jamppi"  "Lakia"
```

```
head(df4$Country)
```

```
## [1] "Canada"         "Belgium"        "United States"  "United Kingdom"
## [5] "Finland"        "South Korea"
```

```
head(df4$Team)
```

```
## [1] "Sentinels"     "Team Liquid"   "Sentinels"     "Team Liquid"
## [5] "Team Liquid"   "NUTURN Gaming"
```

```
head(df4$Agents)
```

```
## [1] "['Jett', 'Reyna', 'Raze']" "['Sage', 'Phoenix']"
## [3] "['Sova', 'Jett']"          "['Brimstone', 'Omen']"
## [5] "['Jett', 'Killjoy']"       "['Sova', 'Raze']"
```

```
head(df4$Maps)
```

```
## [1]  9  9  9  9  9 11
```

```
head(df4$K)
```

```
## [1] 206 177 172 147 155 174
```

```
head(df4$D)
```

```
## [1] 139 131 134 123 130 146
```

```
head(df4$A)
```

```
## [1] 55 56 52 57 32 62
```

```
head(df4$KD)
```

```
## [1] 1.48 1.35 1.28 1.19 1.19 1.19
```

```
head(df4$KDA)
```

```
## [1] 1.87 1.77 1.67 1.65 1.43 1.61
```

```
head(structure(df1))
```

```
##      Map Total Day.1 Day.2 Day.3 Day.4 Day.5 Day.6 Day.7
## 1 Ascent     2     0     0     1     0     1     0     0
## 2   Bind     9     2     3     1     2     1     0     0
## 3  Haven     3     0     0     1     1     0     1     0
## 4 Icebox     8     1     1     0     2     2     2     0
## 5  Split    12     3     2     3     1     2     1     0
```

```
head(structure(df2))
```

```
##      Map Atk.Wins Def.Wins
## 1 Ascent       96      130
## 2   Bind       74       55
## 3  Haven      130      105
## 4 Icebox       99       88
## 5  Split       44       53
```

```
head(structure(df3))
```

```
##      Map Total Day.1 Day.2 Day.3 Day.4 Day.5 Day.6 Day.7
## 1 Ascent    16     3     3     2     3     2     2     1
## 2   Bind     9     1     0     2     1     2     2     1
## 3  Haven    15     3     3     2     2     3     1     1
## 4 Icebox    10     2     2     3     1     1     0     1
## 5  Split     6     0     1     0     2     1     1     1
```

```
head(structure(df4))
```

```
##    Player        Country          Team                    Agents Maps   K   D
## 1    TenZ         Canada     Sentinels ['Jett', 'Reyna', 'Raze']    9 206 139
## 2  ScreaM        Belgium   Team Liquid       ['Sage', 'Phoenix']    9 177 131
## 3 ShahZaM  United States     Sentinels          ['Sova', 'Jett']    9 172 134
## 4    L1NK United Kingdom   Team Liquid     ['Brimstone', 'Omen']    9 147 123
## 5  Jamppi        Finland   Team Liquid       ['Jett', 'Killjoy']    9 155 130
## 6   Lakia    South Korea NUTURN Gaming          ['Sova', 'Raze']   11 174 146
##    A   KD  KDA ACS.Map K.Map D.Map A.Map
## 1 55 1.48 1.87     289  22.8  15.4   6.1
## 2 56 1.35 1.77     265  19.6  14.5   6.2
## 3 52 1.28 1.67     240  19.1  14.8   5.7
## 4 57 1.19 1.65     218  16.3  13.6   6.3
## 5 32 1.19 1.43     229  17.2  14.4   3.5
## 6 62 1.19 1.61     231  15.8  13.2   5.6
```

```
tail(df1)
```

```
##      Map Total Day.1 Day.2 Day.3 Day.4 Day.5 Day.6 Day.7
## 1 Ascent     2     0     0     1     0     1     0     0
## 2   Bind     9     2     3     1     2     1     0     0
## 3  Haven     3     0     0     1     1     0     1     0
## 4 Icebox     8     1     1     0     2     2     2     0
## 5  Split    12     3     2     3     1     2     1     0
```

```
tail(df2)
```

```
##      Map Atk.Wins Def.Wins
## 1 Ascent       96      130
## 2   Bind       74       55
## 3  Haven      130      105
## 4 Icebox       99       88
## 5  Split       44       53
```

```
tail(df3)
```

```
##      Map Total Day.1 Day.2 Day.3 Day.4 Day.5 Day.6 Day.7
## 1 Ascent    16     3     3     2     3     2     2     1
## 2   Bind     9     1     0     2     1     2     2     1
## 3  Haven    15     3     3     2     2     3     1     1
## 4 Icebox    10     2     2     3     1     1     0     1
## 5  Split     6     0     1     0     2     1     1     1
```

```
tail(df4)
```

```
##    Player     Country           Team                      Agents Maps  K  D  A
## 45 Medusa South Korea  Crazy Raccoon                   ['Sova']    4 51 70 23
## 46   Rion       Japan  Crazy Raccoon  ['Astra', 'Viper', 'Omen']    4 46 67 16
## 47 DeNaro      Brazil Sharks Esports                   ['Sova']    5 45 69 24
## 48 GtnziN      Brazil   Team Vikings           ['Raze', 'Yoru']    6 60 96 28
## 49  Light      Brazil Sharks Esports       ['Omen', 'Brimstone']    5 35 67 22
## 50    Fra      Brazil Sharks Esports ['Killjoy', 'Skye', 'Sage']    5 35 69 17
##      KD  KDA ACS.Map K.Map D.Map A.Map
## 45 0.72 1.05     178  12.7  17.5   5.7
## 46 0.68 0.92     148  11.5  16.7   4.0
## 47 0.65 1.00     161   9.0  13.8   4.8
## 48 0.62 0.91     141  10.0  16.0   4.6
## 49 0.52 0.85     125   7.0  13.4   4.4
## 50 0.50 0.75     122   7.0  13.8   3.4
```

```
tail(df1$Map)
```

```
## [1] "Ascent" "Bind"   "Haven"  "Icebox" "Split"
```

```
tail(df1$Total)
```

```
## [1]  2  9  3  8 12
```

```
tail(df1$Day1)
```

```
## NULL
```

```
tail(df1$Day2)
```

```
## NULL
```

```
tail(df1$Day3)
```

```
## NULL
```

```
tail(df1$Day4)
```

```
## NULL
```

```
tail(df1$Day5)
```

```
## NULL
```

```
tail(df1$Day6)
```

```
## NULL
```

```
tail(df1$Day7)
```

```
## NULL
```

```
tail(df2$Map)
```

```
## [1] "Ascent" "Bind"   "Haven"  "Icebox" "Split"
```

```
tail(df2$AtkWins)
```

```
## NULL
```

```
tail(df2$DefWins)
```

```
## NULL
```

```
tail(df3$Map)
```

```
## [1] "Ascent" "Bind"   "Haven"  "Icebox" "Split"
```

```
tail(df3$Total)
```

```
## [1] 16  9 15 10  6
```

```
tail(df3$Day1)
```

```
## NULL
```

```
tail(df3$Day2)
```

```
## NULL
```

```
tail(df3$Day3)
```

```
## NULL
```

```
tail(df3$Day4)
```

```
## NULL
```

```
tail(df3$Day5)
```

```
## NULL
```

```
tail(df3$Day6)
```

```
## NULL
```

```
tail(df3$Day7)
```

```
## NULL
```

```
tail(df4$Player)
```

```
## [1] "Medusa" "Rion"   "DeNaro" "GtnziN" "Light"  "Fra"
```

```
tail(df4$Country)
```

```
## [1] "South Korea" "Japan"       "Brazil"      "Brazil"      "Brazil"
## [6] "Brazil"
```

```
tail(df4$Team)
```

```
## [1] "Crazy Raccoon"  "Crazy Raccoon"  "Sharks Esports" "Team Vikings"
## [5] "Sharks Esports" "Sharks Esports"
```

```
tail(df4$Agents)
```

```
## [1] "['Sova']"                   "['Astra', 'Viper', 'Omen']"
## [3] "['Sova']"                   "['Raze', 'Yoru']"
## [5] "['Omen', 'Brimstone']"      "['Killjoy', 'Skye', 'Sage']"
```

```
tail(df4$Maps)
```

```
## [1] 4 4 5 6 5 5
```

```
tail(df4$K)
```

```
## [1] 51 46 45 60 35 35
```

```
tail(df4$D)
```

```
## [1] 70 67 69 96 67 69
```

```
tail(df4$A)
```

```
## [1] 23 16 24 28 22 17
```

```
tail(df4$KD)
```

```
## [1] 0.72 0.68 0.65 0.62 0.52 0.50
```

```
tail(df4$KDA)
```

```
## [1] 1.05 0.92 1.00 0.91 0.85 0.75
```

```
tail(structure(df1))
```

```
##      Map Total Day.1 Day.2 Day.3 Day.4 Day.5 Day.6 Day.7
## 1 Ascent     2     0     0     1     0     1     0     0
## 2   Bind     9     2     3     1     2     1     0     0
## 3  Haven     3     0     0     1     1     0     1     0
## 4 Icebox     8     1     1     0     2     2     2     0
## 5  Split    12     3     2     3     1     2     1     0
```

```
tail(structure(df2))
```

```
##      Map Atk.Wins Def.Wins
## 1 Ascent       96      130
## 2   Bind       74       55
## 3  Haven      130      105
## 4 Icebox       99       88
## 5  Split       44       53
```

```
tail(structure(df3))
```

```
##      Map Total Day.1 Day.2 Day.3 Day.4 Day.5 Day.6 Day.7
## 1 Ascent    16     3     3     2     3     2     2     1
## 2   Bind     9     1     0     2     1     2     2     1
## 3  Haven    15     3     3     2     2     3     1     1
## 4 Icebox    10     2     2     3     1     1     0     1
## 5  Split     6     0     1     0     2     1     1     1
```

```
tail(structure(df4))
```

```
##    Player     Country           Team                      Agents Maps  K  D  A
## 45 Medusa South Korea  Crazy Raccoon                   ['Sova']    4 51 70 23
## 46   Rion       Japan  Crazy Raccoon  ['Astra', 'Viper', 'Omen']    4 46 67 16
## 47 DeNaro      Brazil Sharks Esports                   ['Sova']    5 45 69 24
## 48 GtnziN      Brazil   Team Vikings           ['Raze', 'Yoru']    6 60 96 28
## 49  Light      Brazil Sharks Esports       ['Omen', 'Brimstone']    5 35 67 22
## 50    Fra      Brazil Sharks Esports ['Killjoy', 'Skye', 'Sage']    5 35 69 17
##      KD  KDA ACS.Map K.Map D.Map A.Map
## 45 0.72 1.05     178  12.7  17.5   5.7
## 46 0.68 0.92     148  11.5  16.7   4.0
## 47 0.65 1.00     161   9.0  13.8   4.8
## 48 0.62 0.91     141  10.0  16.0   4.6
## 49 0.52 0.85     125   7.0  13.4   4.4
## 50 0.50 0.75     122   7.0  13.8   3.4
```

```
class(df1)
```

```
## [1] "data.frame"
```

```
class(df2)
```

```
## [1] "data.frame"
```

```
class(df3)
```

```
## [1] "data.frame"
```

```
class(df4)
```

```
## [1] "data.frame"
```

```
class(df1$Map)
```

```
## [1] "character"
```

```
class(df1$Total)
```

```
## [1] "integer"
```

```
class(df1$Day1)
```

```
## [1] "NULL"
```

```
class(df1$Day2)
```

```
## [1] "NULL"
```

```
class(df1$Day3)
```

```
## [1] "NULL"
```

```
class(df1$Day4)
```

```
## [1] "NULL"
```

```
class(df1$Day5)
```

```
## [1] "NULL"
```

```
class(df1$Day6)
```

```
## [1] "NULL"
```

```
class(df1$Day7)
```

```
## [1] "NULL"
```

```
class(df2$Map)
```

```
## [1] "character"
```

```
class(df2$AtkWins)
```

```
## [1] "NULL"
```

```
class(df2$DefWins)
```

```
## [1] "NULL"
```

```
class(df3$Map)
```

```
## [1] "character"
```

```
class(df3$Total)
```

```
## [1] "integer"
```

```
class(df3$Day1)
```

```
## [1] "NULL"
```

```
class(df3$Day2)
```

```
## [1] "NULL"
```

```
class(df3$Day3)
```

```
## [1] "NULL"
```

```
class(df3$Day4)
```

```
## [1] "NULL"
```

```
class(df3$Day5)
```

```
## [1] "NULL"
```

```
class(df3$Day6)
```

```
## [1] "NULL"
```

```
class(df3$Day7)
```

```
## [1] "NULL"
```

```
class(df4$Player)
```

```
## [1] "character"
```

```
class(df4$Country)
```

```
## [1] "character"
```

```
class(df4$Team)
```

```
## [1] "character"
```

```
class(df4$Agents)
```

```
## [1] "character"
```

```
class(df4$Maps)
```

```
## [1] "integer"
```

```
class(df4$K)
```

```
## [1] "integer"
```

```
class(df4$D)
```

```
## [1] "integer"
```

```
class(df4$A)
```

```
## [1] "integer"
```

```
class(df4$KD)
```

```
## [1] "numeric"
```

```
class(df4$KDA)
```

```
## [1] "numeric"
```

```
class(structure(df1))
```

```
## [1] "data.frame"
```

```
class(structure(df2))
```

```
## [1] "data.frame"
```

```
class(structure(df3))
```

```
## [1] "data.frame"
```

```
class(structure(df4))
```

```
## [1] "data.frame"
```

```
class(dim(df1))
```

```
## [1] "integer"
```

```
class(dim(df2))
```

```
## [1] "integer"
```

```
class(dim(df3))
```

```
## [1] "integer"
```

```
class(dim(df4))
```

```
## [1] "integer"
```

```
class(dimnames(df1))
```

```
## [1] "list"
```

```
class(dimnames(df2))
```

```
## [1] "list"
```

```
class(dimnames(df3))
```

```
## [1] "list"
```

```
class(dimnames(df4))
```

```
## [1] "list"
```

```
summary(df1)
```

```
##      Map                Total           Day.1         Day.2         Day.3
##  Length:5           Min.   : 2.0   Min.   :0.0   Min.   :0.0   Min.   :0.0
##  Class :character   1st Qu.: 3.0   1st Qu.:0.0   1st Qu.:0.0   1st Qu.:1.0
##  Mode  :character   Median : 8.0   Median :1.0   Median :1.0   Median :1.0
##                     Mean   : 6.8   Mean   :1.2   Mean   :1.2   Mean   :1.2
##                     3rd Qu.: 9.0   3rd Qu.:2.0   3rd Qu.:2.0   3rd Qu.:1.0
##                     Max.   :12.0   Max.   :3.0   Max.   :3.0   Max.   :3.0
##      Day.4         Day.5         Day.6         Day.7
##  Min.   :0.0   Min.   :0.0   Min.   :0.0   Min.   :0
##  1st Qu.:1.0   1st Qu.:1.0   1st Qu.:0.0   1st Qu.:0
##  Median :1.0   Median :1.0   Median :1.0   Median :0
##  Mean   :1.2   Mean   :1.2   Mean   :0.8   Mean   :0
##  3rd Qu.:2.0   3rd Qu.:2.0   3rd Qu.:1.0   3rd Qu.:0
##  Max.   :2.0   Max.   :2.0   Max.   :2.0   Max.   :0
```

```
summary(df2)
```

```
##      Map               Atk.Wins        Def.Wins
##  Length:5           Min.   : 44.0   Min.   : 53.0
##  Class :character   1st Qu.: 74.0   1st Qu.: 55.0
##  Mode  :character   Median : 96.0   Median : 88.0
##                     Mean   : 88.6   Mean   : 86.2
##                     3rd Qu.: 99.0   3rd Qu.:105.0
##                     Max.   :130.0   Max.   :130.0
```

```
summary(df3)
```

```
##      Map                Total           Day.1         Day.2         Day.3
##  Length:5           Min.   : 6.0   Min.   :0.0   Min.   :0.0   Min.   :0.0
##  Class :character   1st Qu.: 9.0   1st Qu.:1.0   1st Qu.:1.0   1st Qu.:2.0
##  Mode  :character   Median :10.0   Median :2.0   Median :2.0   Median :2.0
##                     Mean   :11.2   Mean   :1.8   Mean   :1.8   Mean   :1.8
##                     3rd Qu.:15.0   3rd Qu.:3.0   3rd Qu.:3.0   3rd Qu.:2.0
##                     Max.   :16.0   Max.   :3.0   Max.   :3.0   Max.   :3.0
##      Day.4         Day.5         Day.6         Day.7
##  Min.   :1.0   Min.   :1.0   Min.   :0.0   Min.   :1
##  1st Qu.:1.0   1st Qu.:1.0   1st Qu.:1.0   1st Qu.:1
##  Median :2.0   Median :2.0   Median :1.0   Median :1
##  Mean   :1.8   Mean   :1.8   Mean   :1.2   Mean   :1
##  3rd Qu.:2.0   3rd Qu.:2.0   3rd Qu.:2.0   3rd Qu.:1
##  Max.   :3.0   Max.   :3.0   Max.   :2.0   Max.   :1
```

```
summary(df4)
```

```
##     Player            Country              Team             Agents
##  Length:50          Length:50          Length:50          Length:50
##  Class :character   Class :character   Class :character   Class :character
##  Mode  :character   Mode  :character   Mode  :character   Mode  :character
##
##
##
##       Maps             K                D                A
##  Min.   : 4.0   Min.   : 35.00   Min.   : 61.00   Min.   : 10.00
##  1st Qu.: 6.0   1st Qu.: 67.75   1st Qu.: 79.25   1st Qu.: 25.25
##  Median : 7.5   Median :106.50   Median :108.50   Median : 37.00
##  Mean   : 8.2   Mean   :122.04   Mean   :122.12   Mean   : 44.34
##  3rd Qu.:10.0   3rd Qu.:157.25   3rd Qu.:146.00   3rd Qu.: 61.00
##  Max.   :16.0   Max.   :298.00   Max.   :270.00   Max.   :120.00
##        KD               KDA            ACS.Map          K.Map
##  Min.   :0.5000   Min.   :0.750   Min.   :122.0   Min.   : 7.00
##  1st Qu.:0.8450   1st Qu.:1.135   1st Qu.:170.2   1st Qu.:12.78
##  Median :0.9750   Median :1.315   Median :190.5   Median :14.30
##  Mean   :0.9612   Mean   :1.313   Mean   :194.3   Mean   :14.36
##  3rd Qu.:1.0975   3rd Qu.:1.498   3rd Qu.:217.2   3rd Qu.:16.25
##  Max.   :1.4800   Max.   :1.870   Max.   :289.0   Max.   :22.80
##      D.Map            A.Map
##  Min.   :12.10   Min.   :2.100
##  1st Qu.:13.62   1st Qu.:4.000
##  Median :14.80   Median :5.400
##  Mean   :14.90   Mean   :5.180
##  3rd Qu.:16.23   3rd Qu.:6.275
##  Max.   :18.00   Max.   :8.100
```

```
summary(df1$Total)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##     2.0     3.0     8.0     6.8     9.0    12.0
```

```
summary(df1$Day1)
```

```
## Length  Class   Mode
##      0   NULL   NULL
```

```
summary(df1$Day2)
```

```
## Length  Class   Mode
##      0   NULL   NULL
```

```
summary(df1$Day3)
```

```
## Length  Class   Mode
##      0   NULL   NULL
```

```
summary(df1$Day4)
```

```
## Length  Class   Mode
##      0   NULL   NULL
```

```
summary(df1$Day5)
```

```
## Length  Class   Mode
##      0   NULL   NULL
```

```
summary(df1$Day6)
```

```
## Length  Class   Mode
##      0   NULL   NULL
```

```
summary(df1$Day7)
```

```
## Length  Class   Mode
##      0   NULL   NULL
```

```
summary(df2$AtkWins)
```

```
## Length  Class   Mode
##      0   NULL   NULL
```

```
summary(df2$DefWins)
```

```
## Length  Class   Mode
##      0   NULL   NULL
```

```
summary(df3$Total)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##     6.0     9.0    10.0    11.2    15.0    16.0
```

```
summary(df3$Day1)
```

```
## Length  Class   Mode
##      0   NULL   NULL
```

```
summary(df3$Day2)
```

```
## Length  Class   Mode
##      0   NULL   NULL
```

```
summary(df3$Day3)
```

```
## Length  Class   Mode
##      0   NULL   NULL
```

```
summary(df3$Day4)
```

```
## Length  Class   Mode
##      0   NULL   NULL
```

```
summary(df3$Day5)
```

```
## Length  Class   Mode
##      0   NULL   NULL
```

```
summary(df3$Day6)
```

```
## Length  Class   Mode
##      0   NULL   NULL
```

```
summary(df3$Day7)
```

```
## Length  Class   Mode
##      0   NULL   NULL
```

```
summary(df4$Maps)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##     4.0     6.0     7.5     8.2    10.0    16.0
```

```
summary(df4$K)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   35.00   67.75  106.50  122.04  157.25  298.00
```

```
summary(df4$D)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   61.00   79.25  108.50  122.12  146.00  270.00
```

```
summary(df4$A)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   10.00   25.25   37.00   44.34   61.00  120.00
```

```
summary(df4$KD)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.5000  0.8450  0.9750  0.9612  1.0975  1.4800
```

```
summary(df4$KDA)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.750   1.135   1.315   1.313   1.498   1.870
```

```
mean(df4$Maps)
```

```
## [1] 8.2
```

```
mean(df4$K)
```

```
## [1] 122.04
```

```
mean(df4$D)
```

```
## [1] 122.12
```

```
mean(df4$A)
```

```
## [1] 44.34
```

```
mean(df4$KD)
```

```
## [1] 0.9612
```

```
mean(df4$KDA)
```

```
## [1] 1.3134
```

```
median(df4$Maps)
```

```
## [1] 7.5
```

```
median(df4$K)
```

```
## [1] 106.5
```

```
median(df4$D)
```

```
## [1] 108.5
```

```
median(df4$A)
```

```
## [1] 37
```

```
median(df4$KD)
```

```
## [1] 0.975
```

```
median(df4$KDA)
```

```
## [1] 1.315
```

```
sd(df4$Maps)
```

```
## [1] 3.434519
```

```
sd(df4$K)
```

```
## [1] 64.70276
```

```
sd(df4$D)
```

```
## [1] 52.72286
```

```
sd(df4$A)
```

```
## [1] 25.56034
```

```
sd(df4$KD)
```

```
## [1] 0.1998228
```

```
sd(df4$KDA)
```

```
## [1] 0.2554357
```

`

```
var(df4$Maps)
```

```
## [1] 11.79592
```

```
var(df4$K)
```

```
## [1] 4186.447
```

```
var(df4$D)
```

```
## [1] 2779.7
```

```
var(df4$A)
```

```
## [1] 653.331
```

```
var(df4$KD)
```

```
## [1] 0.03992914
```

```
var(df4$KDA)
```

```
## [1] 0.06524739
```

```
quantile(df4$Maps)
```

```
##   0%  25%  50%  75% 100%
##  4.0  6.0  7.5 10.0 16.0
```

```
quantile(df4$K)
```

```
##     0%    25%    50%    75%   100%
##  35.00  67.75 106.50 157.25 298.00
```

```
quantile(df4$D)
```

```
##     0%    25%    50%    75%   100%
##  61.00  79.25 108.50 146.00 270.00
```

```
quantile(df4$A)
```

```
##     0%    25%    50%    75%   100%
##  10.00  25.25  37.00  61.00 120.00
```

```
quantile(df4$KD)
```

```
##     0%    25%    50%    75%   100%
## 0.5000 0.8450 0.9750 1.0975 1.4800
```

```
quantile(df4$KDA)
```

```
##     0%    25%    50%    75%   100%
## 0.7500 1.1350 1.3150 1.4975 1.8700
```

```
tdf= attach(df1)
tdf
```

```
## <environment: 0x000002d40c1683c0>
## attr(,"name")
## [1] "df1"
```

```
df1[3,3]
```

```
## [1] 0
```

```
df2[3,3]
```

```
## [1] 105
```

```
df3[3,3]
```

```
## [1] 3
```

```
df4[3,3]
```

```
## [1] "Sentinels"
```

```
head(as.matrix(df1))
```

```
##      Map      Total Day.1 Day.2 Day.3 Day.4 Day.5 Day.6 Day.7
## [1,] "Ascent" " 2"  "0"   "0"   "1"   "0"   "1"   "0"   "0"
## [2,] "Bind"   " 9"  "2"   "3"   "1"   "2"   "1"   "0"   "0"
## [3,] "Haven"  " 3"  "0"   "0"   "1"   "1"   "0"   "1"   "0"
## [4,] "Icebox" " 8"  "1"   "1"   "0"   "2"   "2"   "2"   "0"
## [5,] "Split"  "12"  "3"   "2"   "3"   "1"   "2"   "1"   "0"
```

```
head(as.matrix(df2))
```

```
##      Map      Atk.Wins Def.Wins
## [1,] "Ascent" " 96"    "130"
## [2,] "Bind"   " 74"    " 55"
## [3,] "Haven"  "130"    "105"
## [4,] "Icebox" " 99"    " 88"
## [5,] "Split"  " 44"    " 53"
```

```
head(as.matrix(df3))
```

```
##      Map      Total Day.1 Day.2 Day.3 Day.4 Day.5 Day.6 Day.7
## [1,] "Ascent" "16"  "3"   "3"   "2"   "3"   "2"   "2"   "1"
## [2,] "Bind"   " 9"  "1"   "0"   "2"   "1"   "2"   "2"   "1"
## [3,] "Haven"  "15"  "3"   "3"   "2"   "2"   "3"   "1"   "1"
## [4,] "Icebox" "10"  "2"   "2"   "3"   "1"   "1"   "0"   "1"
## [5,] "Split"  " 6"  "0"   "1"   "0"   "2"   "1"   "1"   "1"
```

```
head(as.matrix(df4))
```

```
##      Player    Country          Team            Agents
## [1,] "TenZ"    "Canada"         "Sentinels"     "['Jett', 'Reyna', 'Raze']"
## [2,] "ScreaM"  "Belgium"        "Team Liquid"   "['Sage', 'Phoenix']"
## [3,] "ShahZaM" "United States"  "Sentinels"     "['Sova', 'Jett']"
## [4,] "L1NK"    "United Kingdom" "Team Liquid"   "['Brimstone', 'Omen']"
## [5,] "Jamppi"  "Finland"        "Team Liquid"   "['Jett', 'Killjoy']"
## [6,] "Lakia"   "South Korea"    "NUTURN Gaming" "['Sova', 'Raze']"
##      Maps K     D     A     KD     KDA    ACS.Map K.Map  D.Map  A.Map
## [1,] " 9" "206" "139" " 55" "1.48" "1.87" "289"   "22.8" "15.4" "6.1"
## [2,] " 9" "177" "131" " 56" "1.35" "1.77" "265"   "19.6" "14.5" "6.2"
## [3,] " 9" "172" "134" " 52" "1.28" "1.67" "240"   "19.1" "14.8" "5.7"
## [4,] " 9" "147" "123" " 57" "1.19" "1.65" "218"   "16.3" "13.6" "6.3"
## [5,] " 9" "155" "130" " 32" "1.19" "1.43" "229"   "17.2" "14.4" "3.5"
## [6,] "11" "174" "146" " 62" "1.19" "1.61" "231"   "15.8" "13.2" "5.6"
```

```
tail(as.matrix(df1))
```

```
##      Map      Total Day.1 Day.2 Day.3 Day.4 Day.5 Day.6 Day.7
## [1,] "Ascent" " 2"  "0"   "0"   "1"   "0"   "1"   "0"   "0"
## [2,] "Bind"   " 9"  "2"   "3"   "1"   "2"   "1"   "0"   "0"
## [3,] "Haven"  " 3"  "0"   "0"   "1"   "1"   "0"   "1"   "0"
## [4,] "Icebox" " 8"  "1"   "1"   "0"   "2"   "2"   "2"   "0"
## [5,] "Split"  "12"  "3"   "2"   "3"   "1"   "2"   "1"   "0"
```

```
tail(as.matrix(df2))
```

```
##      Map      Atk.Wins Def.Wins
## [1,] "Ascent" " 96"    "130"
## [2,] "Bind"   " 74"    " 55"
## [3,] "Haven"  "130"    "105"
## [4,] "Icebox" " 99"    " 88"
## [5,] "Split"  " 44"    " 53"
```

```
tail(as.matrix(df3))
```

```
##      Map      Total Day.1 Day.2 Day.3 Day.4 Day.5 Day.6 Day.7
## [1,] "Ascent" "16"  "3"   "3"   "2"   "3"   "2"   "2"   "1"
## [2,] "Bind"   " 9"  "1"   "0"   "2"   "1"   "2"   "2"   "1"
## [3,] "Haven"  "15"  "3"   "3"   "2"   "2"   "3"   "1"   "1"
## [4,] "Icebox" "10"  "2"   "2"   "3"   "1"   "1"   "0"   "1"
## [5,] "Split"  " 6"  "0"   "1"   "0"   "2"   "1"   "1"   "1"
```

```
tail(as.matrix(df4))
```

```
##       Player   Country       Team             Agents
## [45,] "Medusa" "South Korea" "Crazy Raccoon"  "['Sova']"
## [46,] "Rion"   "Japan"       "Crazy Raccoon"  "['Astra', 'Viper', 'Omen']"
## [47,] "DeNaro" "Brazil"      "Sharks Esports" "['Sova']"
## [48,] "GtnziN" "Brazil"      "Team Vikings"   "['Raze', 'Yoru']"
## [49,] "Light"  "Brazil"      "Sharks Esports" "['Omen', 'Brimstone']"
## [50,] "Fra"    "Brazil"      "Sharks Esports" "['Killjoy', 'Skye', 'Sage']"
##       Maps K     D     A     KD     KDA    ACS.Map K.Map  D.Map  A.Map
## [45,] " 4" " 51" " 70" " 23" "0.72" "1.05" "178"   "12.7" "17.5" "5.7"
## [46,] " 4" " 46" " 67" " 16" "0.68" "0.92" "148"   "11.5" "16.7" "4.0"
## [47,] " 5" " 45" " 69" " 24" "0.65" "1.00" "161"   " 9.0" "13.8" "4.8"
## [48,] " 6" " 60" " 96" " 28" "0.62" "0.91" "141"   "10.0" "16.0" "4.6"
## [49,] " 5" " 35" " 67" " 22" "0.52" "0.85" "125"   " 7.0" "13.4" "4.4"
## [50,] " 5" " 35" " 69" " 17" "0.50" "0.75" "122"   " 7.0" "13.8" "3.4"
```

```
is.table(df1)
```

```
## [1] FALSE
```

```
is.table(df2)
```

```
## [1] FALSE
```

```
is.table(df3)
```

```
## [1] FALSE
```

```
is.table(df4)
```

```
## [1] FALSE
```

```
is.data.frame(df1)
```

```
## [1] TRUE
```

```
is.data.frame(df2)
```

```
## [1] TRUE
```

```
is.data.frame(df3)
```

```
## [1] TRUE
```

```
is.data.frame(df4)
```

```
## [1] TRUE
```

```
is.character(df1)
```

```
## [1] FALSE
```

```
is.character(df2)
```

```
## [1] FALSE
```

```
is.character(df3)
```

```
## [1] FALSE
```

```
is.character(df4)
```

```
## [1] FALSE
```

```
if(class(df1) == 'data.frame') TRUE else FALSE
```

```
## [1] TRUE
```

```
if(class(df2) == 'data.frame') TRUE else FALSE
```

```
## [1] TRUE
```

```
if(class(df3) == 'data.frame') TRUE else FALSE
```

```
## [1] TRUE
```

```
if(class(df4) == 'data.frame') TRUE else FALSE
```

```
## [1] TRUE
```

```
stem(df4$Maps, scale=10)
```

```
##
##   The decimal point is 1 digit(s) to the left of the |
##
##    40 | 00000
##    42 |
##    44 |
##    46 |
##    48 |
##    50 | 00000
##    52 |
##    54 |
##    56 |
##    58 |
##    60 | 000000000000000
##    62 |
##    64 |
##    66 |
##    68 |
##    70 |
##    72 |
##    74 |
##    76 |
##    78 |
##    80 |
##    82 |
##    84 |
##    86 |
##    88 |
##    90 | 0000000000
##    92 |
##    94 |
##    96 |
##    98 |
##   100 | 00000
##   102 |
##   104 |
##   106 |
##   108 |
##   110 | 00000
##   112 |
##   114 |
##   116 |
##   118 |
##   120 |
##   122 |
##   124 |
##   126 |
##   128 |
##   130 |
##   132 |
##   134 |
##   136 |
##   138 |
##   140 |
##   142 |
```

```
##   144 |
##   146 |
##   148 |
##   150 |
##   152 |
##   154 |
##   156 |
##   158 |
##   160 | 00000
```

```
stem(df4$K, scale=10)
```

```
##
##   The decimal point is 1 digit(s) to the right of the |
##
##    3 | 55
##    4 |
##    4 | 56
##    5 | 1
##    5 |
##    6 | 002223
##    6 | 57
##    7 | 04
##    7 | 58
##    8 | 11
##    8 | 788
##    9 |
##    9 |
##   10 | 004
##   10 | 9
##   11 |
##   11 |
##   12 | 14
##   12 | 7
##   13 |
##   13 | 67
##   14 |
##   14 | 677
##   15 | 01
##   15 | 58
##   16 | 1
##   16 |
##   17 | 24
##   17 | 7
##   18 | 4
##   18 | 5
##   19 |
##   19 |
##   20 |
##   20 | 6
##   21 |
##   21 |
##   22 |
##   22 |
##   23 |
##   23 |
##   24 | 01
##   24 | 7
##   25 |
##   25 |
##   26 |
##   26 |
##   27 | 0
##   27 |
##   28 |
##   28 |
```

```
##   29 |
##   29 | 8
```

```
stem(df4$D, scale=10)
```

```
##
##   The decimal point is at the |
##
##    60 | 0
##    62 |
##    64 |
##    66 | 0000
##    68 | 00
##    70 | 0
##    72 | 00
##    74 | 00
##    76 |
##    78 | 0
##    80 | 00
##    82 |
##    84 |
##    86 | 0
##    88 | 0
##    90 |
##    92 | 000
##    94 |
##    96 | 0
##    98 | 00
##   100 | 00
##   102 |
##   104 |
##   106 |
##   108 |
##   110 |
##   112 |
##   114 |
##   116 | 0
##   118 |
##   120 |
##   122 | 00
##   124 | 0
##   126 | 0
##   128 |
##   130 | 00
##   132 | 0
##   134 | 0
##   136 |
##   138 | 0
##   140 |
##   142 | 0
##   144 |
##   146 | 00
##   148 |
##   150 |
##   152 |
##   154 |
##   156 |
##   158 | 0
##   160 |
##   162 | 0
```

```
##   164 |
##   166 | 0
##   168 | 00
##   170 |
##   172 | 0
##   174 | 0
##   176 |
##   178 |
##   180 |
##   182 |
##   184 |
##   186 |
##   188 |
##   190 |
##   192 |
##   194 |
##   196 |
##   198 |
##   200 |
##   202 |
##   204 |
##   206 | 0
##   208 |
##   210 |
##   212 |
##   214 |
##   216 |
##   218 |
##   220 |
##   222 |
##   224 |
##   226 |
##   228 |
##   230 |
##   232 |
##   234 |
##   236 |
##   238 |
##   240 | 00
##   242 |
##   244 |
##   246 | 0
##   248 |
##   250 |
##   252 |
##   254 |
##   256 |
##   258 |
##   260 |
##   262 |
##   264 |
##   266 |
##   268 |
##   270 | 0
```

```
stem(df4$A, scale=10)
```

```
##
##   The decimal point is at the |
##
##    10 | 0
##    12 | 0
##    14 | 00
##    16 | 000
##    18 |
##    20 |
##    22 | 000
##    24 | 000
##    26 | 000
##    28 | 00
##    30 | 00
##    32 | 00
##    34 | 00
##    36 | 0
##    38 | 00
##    40 | 0
##    42 | 0
##    44 |
##    46 | 0
##    48 |
##    50 |
##    52 | 0
##    54 | 00
##    56 | 000
##    58 |
##    60 | 00
##    62 | 00
##    64 | 00
##    66 | 0
##    68 | 0
##    70 |
##    72 | 0
##    74 |
##    76 |
##    78 |
##    80 | 0
##    82 | 0
##    84 | 0
##    86 |
##    88 |
##    90 |
##    92 |
##    94 |
##    96 |
##    98 |
##   100 |
##   102 |
##   104 |
##   106 |
##   108 |
##   110 |
##   112 |
```

```
##   114 |
##   116 |
##   118 |
##   120 | 00
```

```
seq_along(df2)
```

```
## [1] 1 2 3
```

```
seq_along(df3)
```

```
## [1] 1 2 3 4 5 6 7 8 9
```

```
seq_along(df4)
```

```
##  [1]  1  2  3  4  5  6  7  8  9 10 11 12 13 14
```

```
wilcox.test(df4$Maps, df4$K)
```

```
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  df4$Maps and df4$K
## W = 0, p-value < 2.2e-16
## alternative hypothesis: true location shift is not equal to 0
```

```
wilcox.test(df4$Maps, df4$D)
```

```
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  df4$Maps and df4$D
## W = 0, p-value < 2.2e-16
## alternative hypothesis: true location shift is not equal to 0
```

```
wilcox.test(df4$Maps, df4$A)
```

```
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  df4$Maps and df4$A
## W = 30, p-value < 2.2e-16
## alternative hypothesis: true location shift is not equal to 0
```

```
wilcox.test(df4$Maps, df4$KD)
```

```
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  df4$Maps and df4$KD
## W = 2500, p-value < 2.2e-16
## alternative hypothesis: true location shift is not equal to 0
```

```
wilcox.test(df4$Maps, df4$KDA)
```

```
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  df4$Maps and df4$KDA
## W = 2500, p-value < 2.2e-16
## alternative hypothesis: true location shift is not equal to 0
```

```
apply(df1[ ,2:3],2 ,mean)
```

```
## Total Day.1
##   6.8   1.2
```

```
apply(df2[ ,2:3],2 ,mean)
```

```
## Atk.Wins Def.Wins
##     88.6     86.2
```

```
apply(df3[ ,2:3],2 ,mean)
```

```
## Total Day.1
##  11.2   1.8
```

```
apply(df1[ , 2:3], 2, var)
```

```
## Total Day.1
##  17.7   1.7
```

```
apply(df2[ , 2:3], 2, var)
```

```
## Atk.Wins Def.Wins
##   1019.8   1087.7
```

```
apply(df3[ , 2:3], 2, var)
```

```
## Total Day.1
##  17.7   1.7
```

```
head(na.omit(df1))
```

```
##      Map Total Day.1 Day.2 Day.3 Day.4 Day.5 Day.6 Day.7
## 1 Ascent     2     0     0     1     0     1     0     0
## 2   Bind     9     2     3     1     2     1     0     0
## 3  Haven     3     0     0     1     1     0     1     0
## 4 Icebox     8     1     1     0     2     2     2     0
## 5  Split    12     3     2     3     1     2     1     0
```

```
head(na.omit(df2))
```

```
##      Map Atk.Wins Def.Wins
## 1 Ascent       96      130
## 2   Bind       74       55
## 3  Haven      130      105
## 4 Icebox       99       88
## 5  Split       44       53
```

```
head(na.omit(df3))
```

```
##      Map Total Day.1 Day.2 Day.3 Day.4 Day.5 Day.6 Day.7
## 1 Ascent    16     3     3     2     3     2     2     1
## 2   Bind     9     1     0     2     1     2     2     1
## 3  Haven    15     3     3     2     2     3     1     1
## 4 Icebox    10     2     2     3     1     1     0     1
## 5  Split     6     0     1     0     2     1     1     1
```

```
head(na.omit(df4))
```

```
##    Player        Country          Team                    Agents Maps   K   D
## 1    TenZ         Canada     Sentinels ['Jett', 'Reyna', 'Raze']    9 206 139
## 2  ScreaM        Belgium   Team Liquid       ['Sage', 'Phoenix']    9 177 131
## 3 ShahZaM  United States     Sentinels          ['Sova', 'Jett']    9 172 134
## 4    L1NK United Kingdom   Team Liquid     ['Brimstone', 'Omen']    9 147 123
## 5  Jamppi        Finland   Team Liquid       ['Jett', 'Killjoy']    9 155 130
## 6   Lakia    South Korea NUTURN Gaming          ['Sova', 'Raze']   11 174 146
##    A   KD  KDA ACS.Map K.Map D.Map A.Map
## 1 55 1.48 1.87     289  22.8  15.4   6.1
## 2 56 1.35 1.77     265  19.6  14.5   6.2
## 3 52 1.28 1.67     240  19.1  14.8   5.7
## 4 57 1.19 1.65     218  16.3  13.6   6.3
## 5 32 1.19 1.43     229  17.2  14.4   3.5
## 6 62 1.19 1.61     231  15.8  13.2   5.6
```

```
tail(na.omit(df1))
```

```
##      Map Total Day.1 Day.2 Day.3 Day.4 Day.5 Day.6 Day.7
## 1 Ascent     2     0     0     1     0     1     0     0
## 2   Bind     9     2     3     1     2     1     0     0
## 3  Haven     3     0     0     1     1     0     1     0
## 4 Icebox     8     1     1     0     2     2     2     0
## 5  Split    12     3     2     3     1     2     1     0
```

```
tail(na.omit(df2))
```

```
##      Map Atk.Wins Def.Wins
## 1 Ascent       96      130
## 2   Bind       74       55
## 3  Haven      130      105
## 4 Icebox       99       88
## 5  Split       44       53
```

```
tail(na.omit(df3))
```

```
##      Map Total Day.1 Day.2 Day.3 Day.4 Day.5 Day.6 Day.7
## 1 Ascent    16     3     3     2     3     2     2     1
## 2   Bind     9     1     0     2     1     2     2     1
## 3  Haven    15     3     3     2     2     3     1     1
## 4 Icebox    10     2     2     3     1     1     0     1
## 5  Split     6     0     1     0     2     1     1     1
```

```
tail(na.omit(df4))
```

```
##    Player     Country           Team                      Agents Maps  K  D  A
## 45 Medusa South Korea  Crazy Raccoon                   ['Sova']    4 51 70 23
## 46   Rion       Japan  Crazy Raccoon  ['Astra', 'Viper', 'Omen']    4 46 67 16
## 47 DeNaro      Brazil Sharks Esports                   ['Sova']    5 45 69 24
## 48 GtnziN      Brazil   Team Vikings           ['Raze', 'Yoru']    6 60 96 28
## 49  Light      Brazil Sharks Esports      ['Omen', 'Brimstone']    5 35 67 22
## 50    Fra      Brazil Sharks Esports ['Killjoy', 'Skye', 'Sage']    5 35 69 17
##      KD  KDA ACS.Map K.Map D.Map A.Map
## 45 0.72 1.05     178  12.7  17.5   5.7
## 46 0.68 0.92     148  11.5  16.7   4.0
## 47 0.65 1.00     161   9.0  13.8   4.8
## 48 0.62 0.91     141  10.0  16.0   4.6
## 49 0.52 0.85     125   7.0  13.4   4.4
## 50 0.50 0.75     122   7.0  13.8   3.4
```

```
objects(df1)
```

```
## [1] "Day.1" "Day.2" "Day.3" "Day.4" "Day.5" "Day.6" "Day.7" "Map"   "Total"
```

```
objects(df2)
```

```
## [1] "Atk.Wins" "Def.Wins" "Map"
```

```
objects(df3)
```

```
## [1] "Day.1" "Day.2" "Day.3" "Day.4" "Day.5" "Day.6" "Day.7" "Map"   "Total"
```

```
objects(df4)
```

```
##  [1] "A"       "A.Map"   "ACS.Map" "Agents"  "Country" "D"       "D.Map"
##  [8] "K"       "K.Map"   "KD"      "KDA"     "Maps"    "Player"  "Team"
```

```
formula(df1)
```

```
## Map ~ Total + Day.1 + Day.2 + Day.3 + Day.4 + Day.5 + Day.6 +
##     Day.7
```

```
formula(df2)
```

```
## Map ~ Atk.Wins + Def.Wins
```

```
formula(df3)
```

```
## Map ~ Total + Day.1 + Day.2 + Day.3 + Day.4 + Day.5 + Day.6 +
##     Day.7
```

```
formula(df4)
```

```
## Player ~ Country + Team + Agents + Maps + K + D + A + KD + KDA +
##     ACS.Map + K.Map + D.Map + A.Map
```

```
nlevels(df1)
```

```
## [1] 0
```

```
nlevels(df2)
```

```
## [1] 0
```

```
nlevels(df3)
```

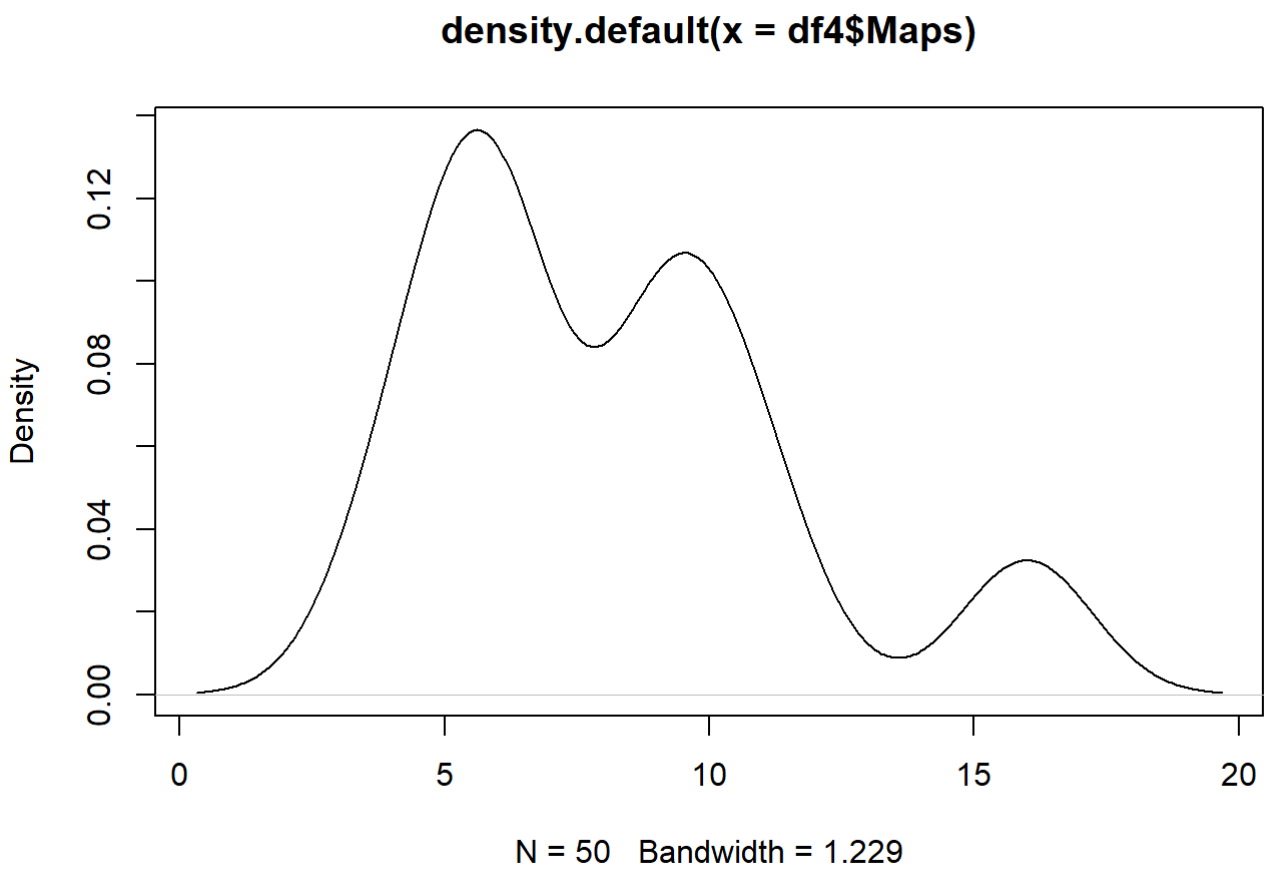
```
## [1] 0
```

```
nlevels(df4)
```

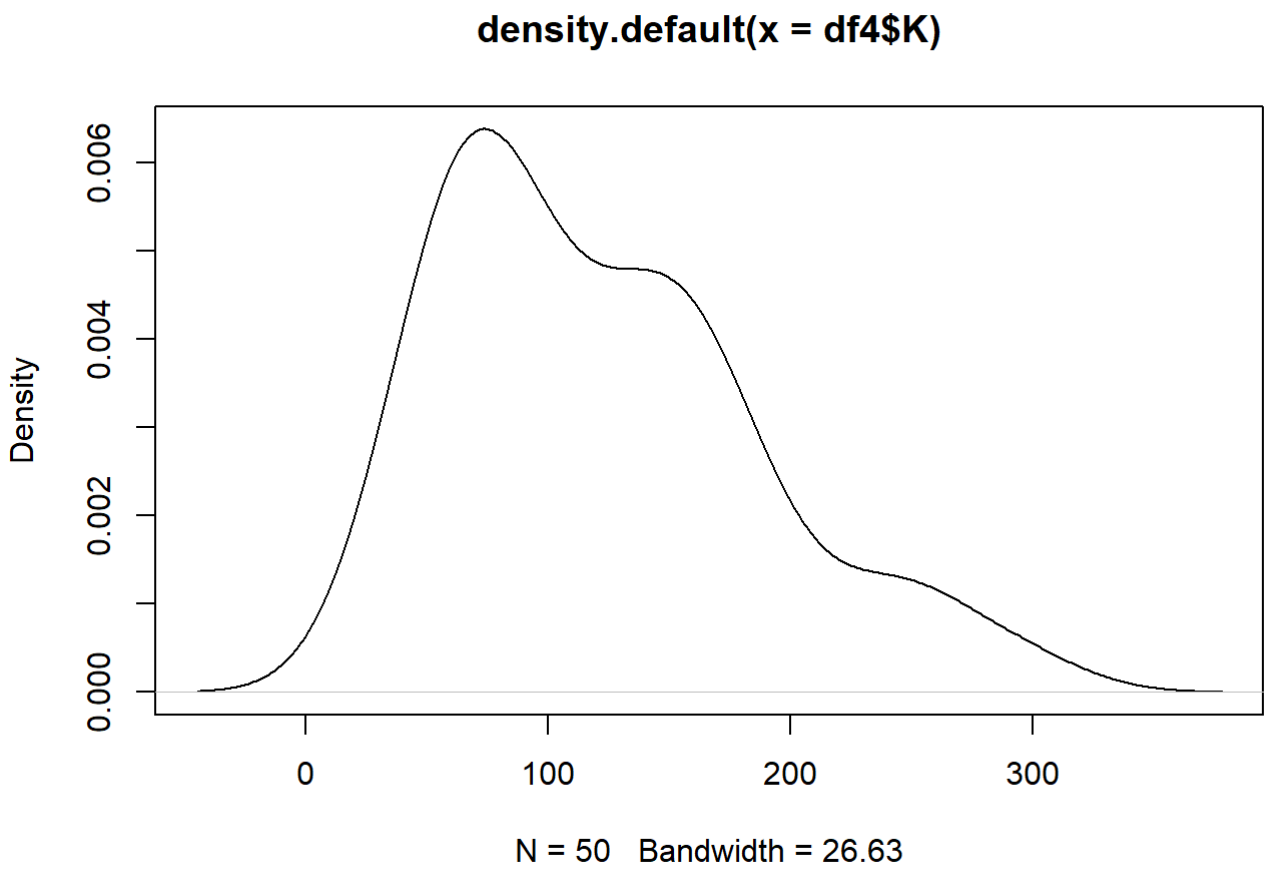
```
## [1] 0
```

```
library(ggplot2)
```

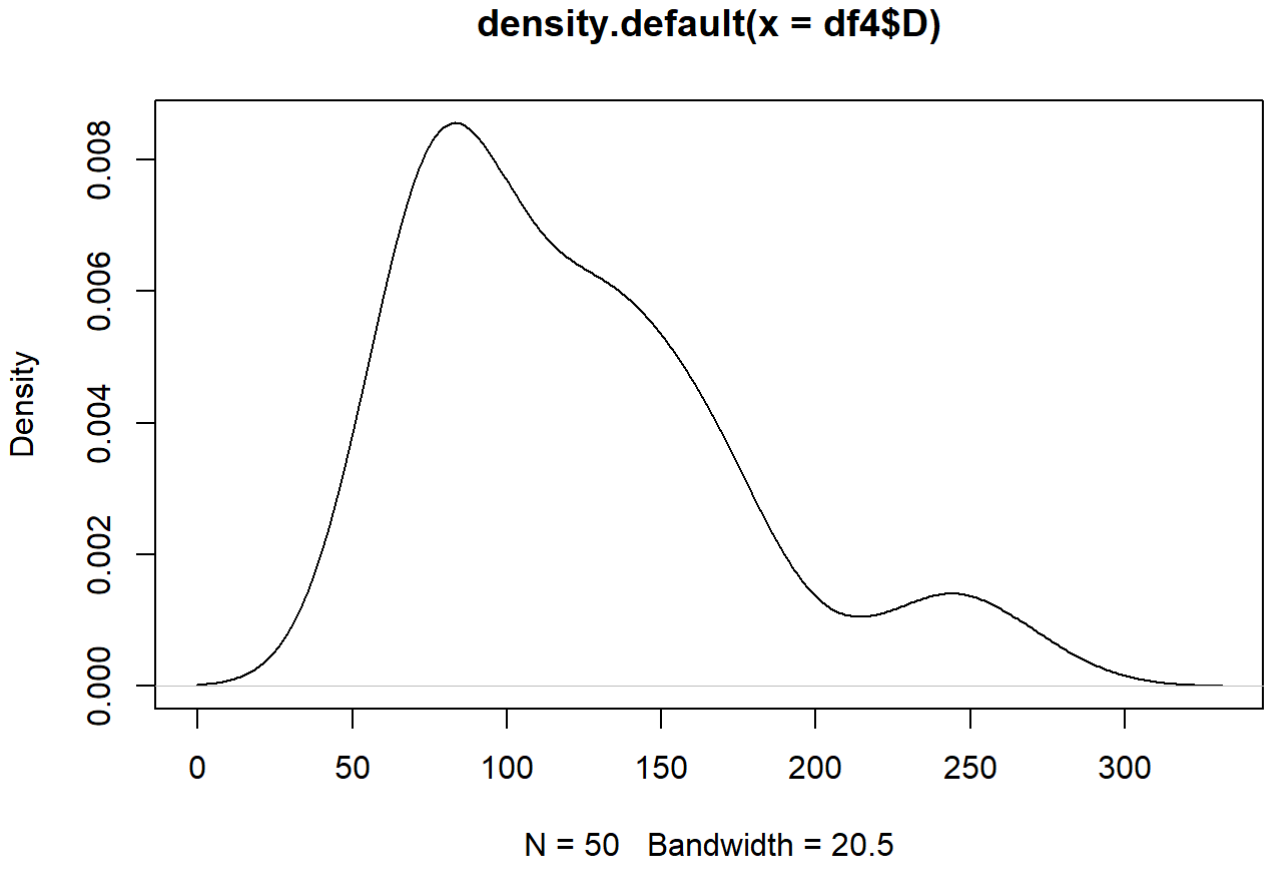
```
plot(density(df4$Maps))
```



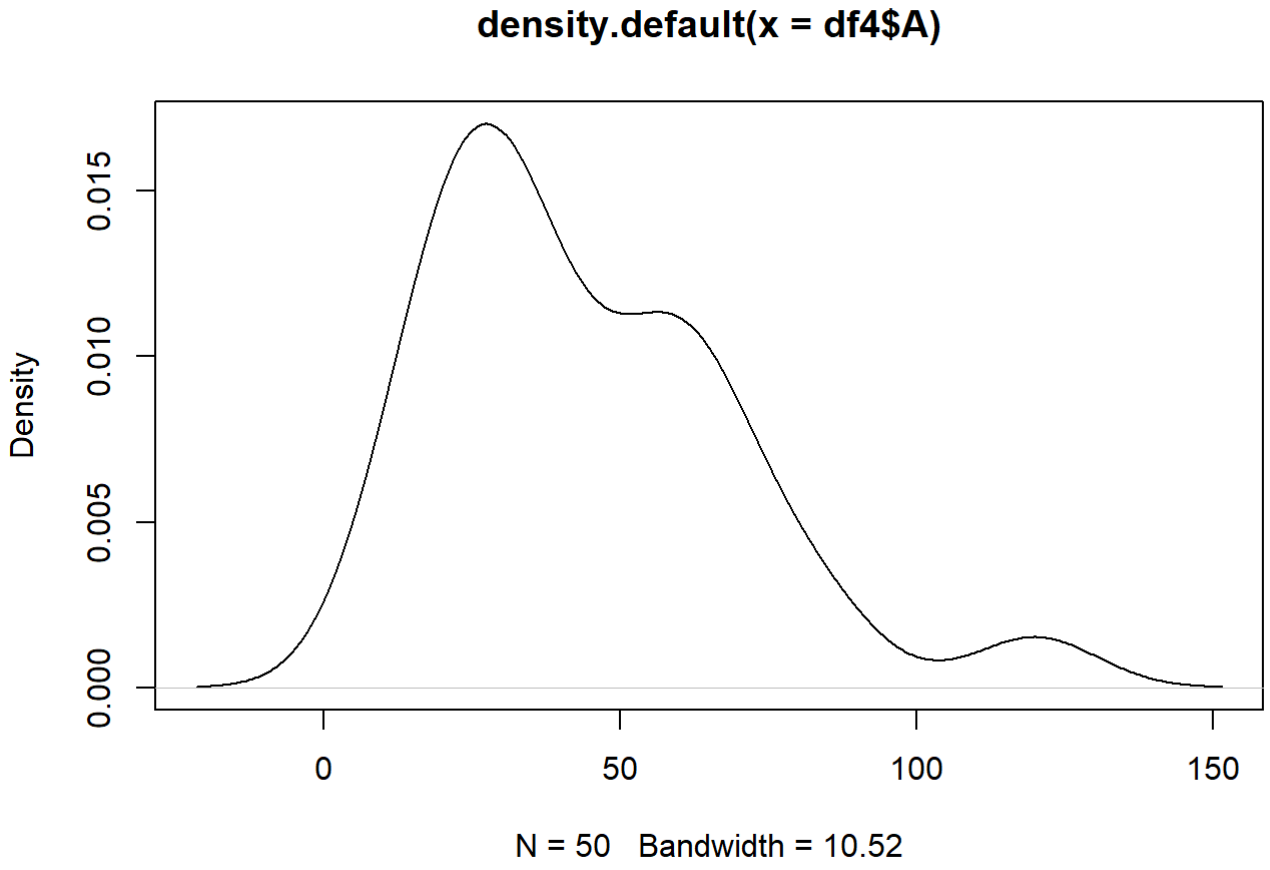

```
plot(density(df4$K))
```



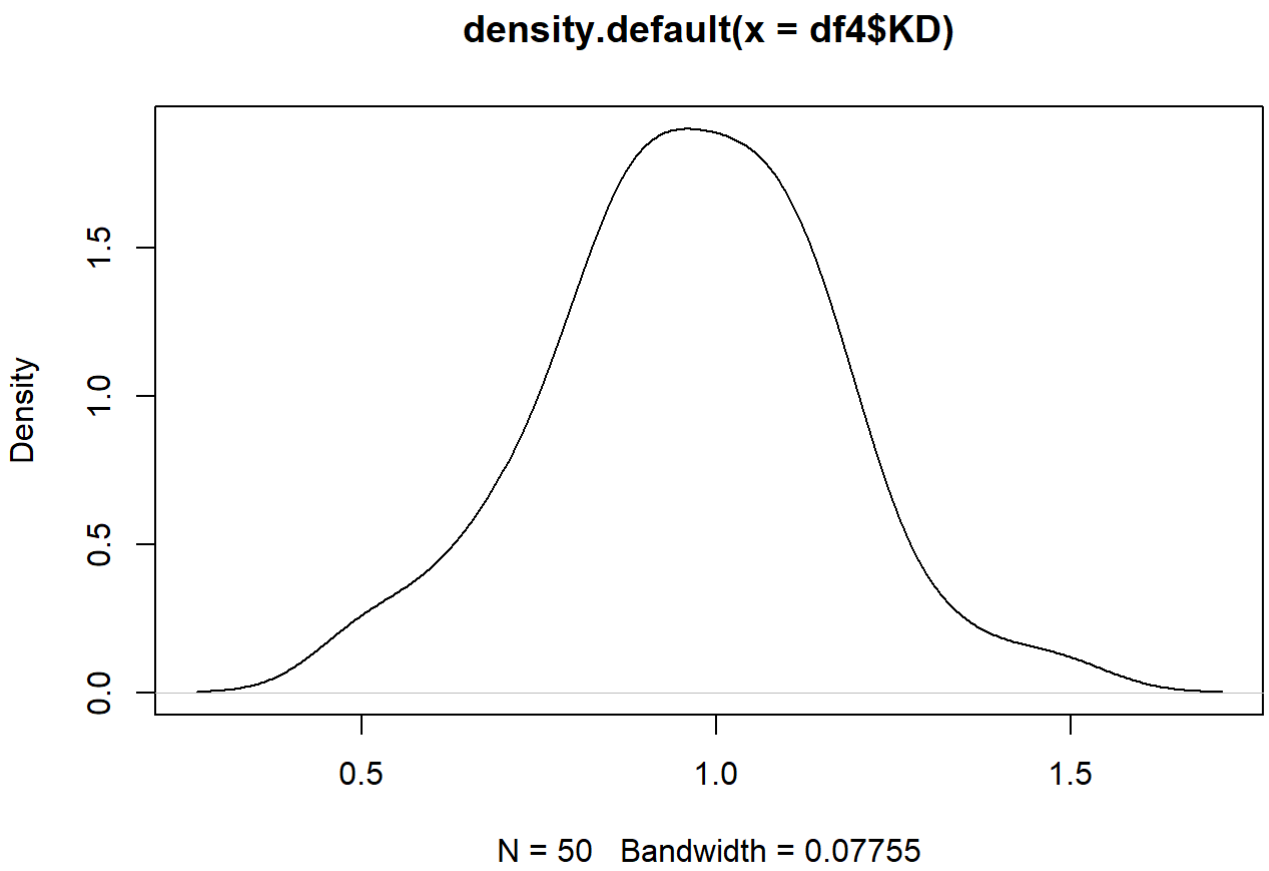

```
plot(density(df4$D))
```



```
plot(density(df4$A))
```




```
plot(density(df4$KD))
```




```
plot(density(df4$KDA))
```