Chess Database

# 1. Introduction

This document is a summary of the chess database.

## 2. Statistics

The database contains 2600 games. The following sections describe the games in more detail.

# 2.1 General results

The following table shows the results of games.

|  |  |  |  |
| --- | --- | --- | --- |
|  | White wins | Draws | Black wins |
| Total | 704 | 1600 | 296 |
| Percentage | 27.08% | 61.54% | 11.38% |

## 2.1.1 Result table for Stockfish

The following table shows the results of games where Stockfish either won or lost, depending on Stockfish color

def create\_document\_result\_table\_with\_stockfish(self, list\_of\_games, list\_of\_drawed\_games):

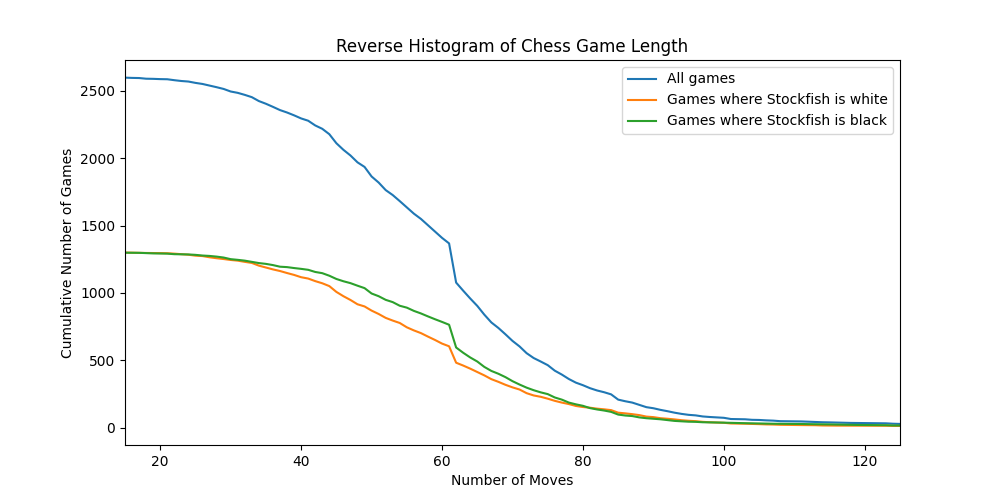
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Wins | Draws | Losses | Winning Percentage |
| Starts as white | 698 | 601 | 2 | 53.65% |
| Starts as black | 294 | 999 | 6 | 22.63% |
| Total | 992 | 1600 | 8 | 38.15% |

## 2.2 Move count distributions

The following graphs shows the distribution of the amount moves in the given set of games.

### 2.2.1 All games

The following graph shows the distribution of the amount moves in all games.

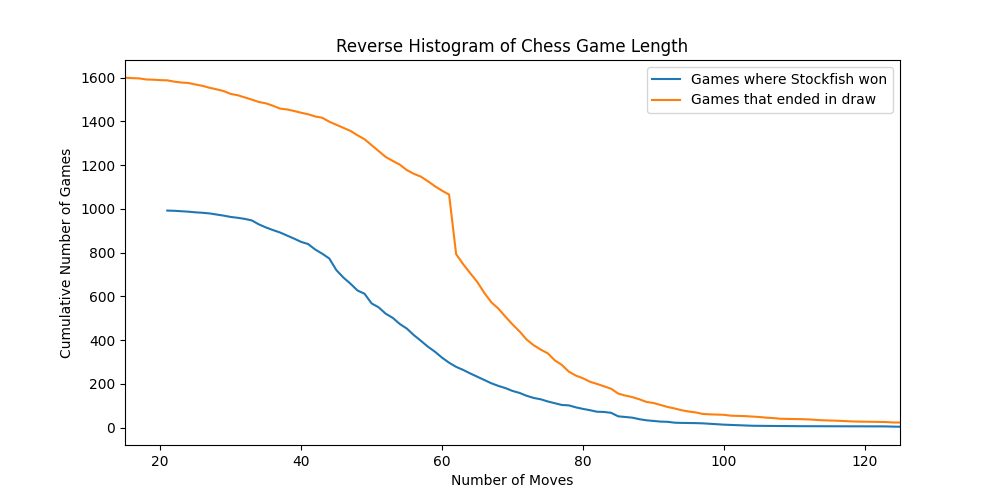


Mean and standard deviation table for all games

|  |  |  |
| --- | --- | --- |
|  | Mean | Standard Deviation |
| Number of moves | 60.33 | 19.58 |

### 2.2.2 Either stockfish won or draws

The following graph shows the distribution of the amount moves in games where Stockfish won.



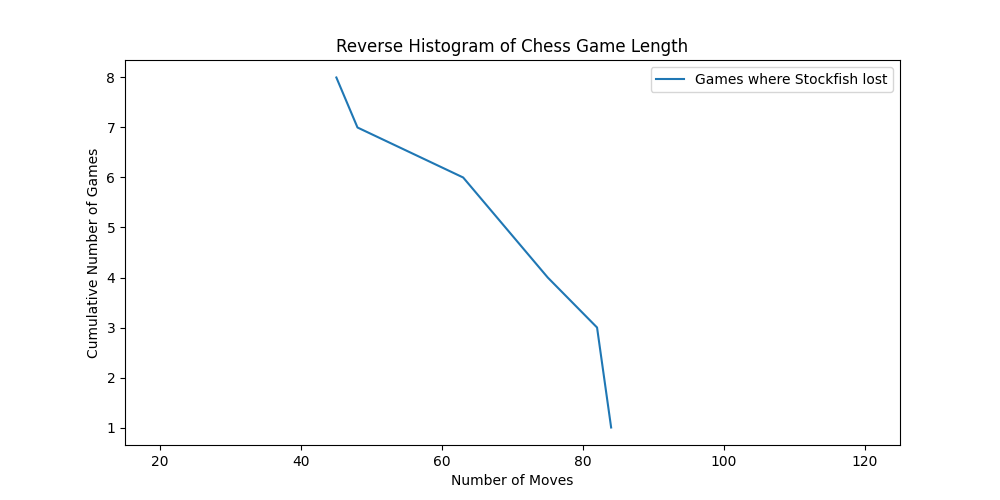
Mean and standard deviation table for games where Stockfish won or drew

|  |  |  |
| --- | --- | --- |
|  | Mean | Standard Deviation |
| Number of moves | 55.08 | 16.66 |

A noteworthy observation is that we get a spike in the distribution of moves when Stockfish draws.

### 2.2.3 Stockfish loses

The following graph shows the distribution of the amount moves in games where Stockfish lost.



Mean and standard deviation table for games where Stockfish lost

|  |  |  |
| --- | --- | --- |
|  | Mean | Standard Deviation |
| Number of moves | 68.62 | 14.48 |

## 3.1 Openings

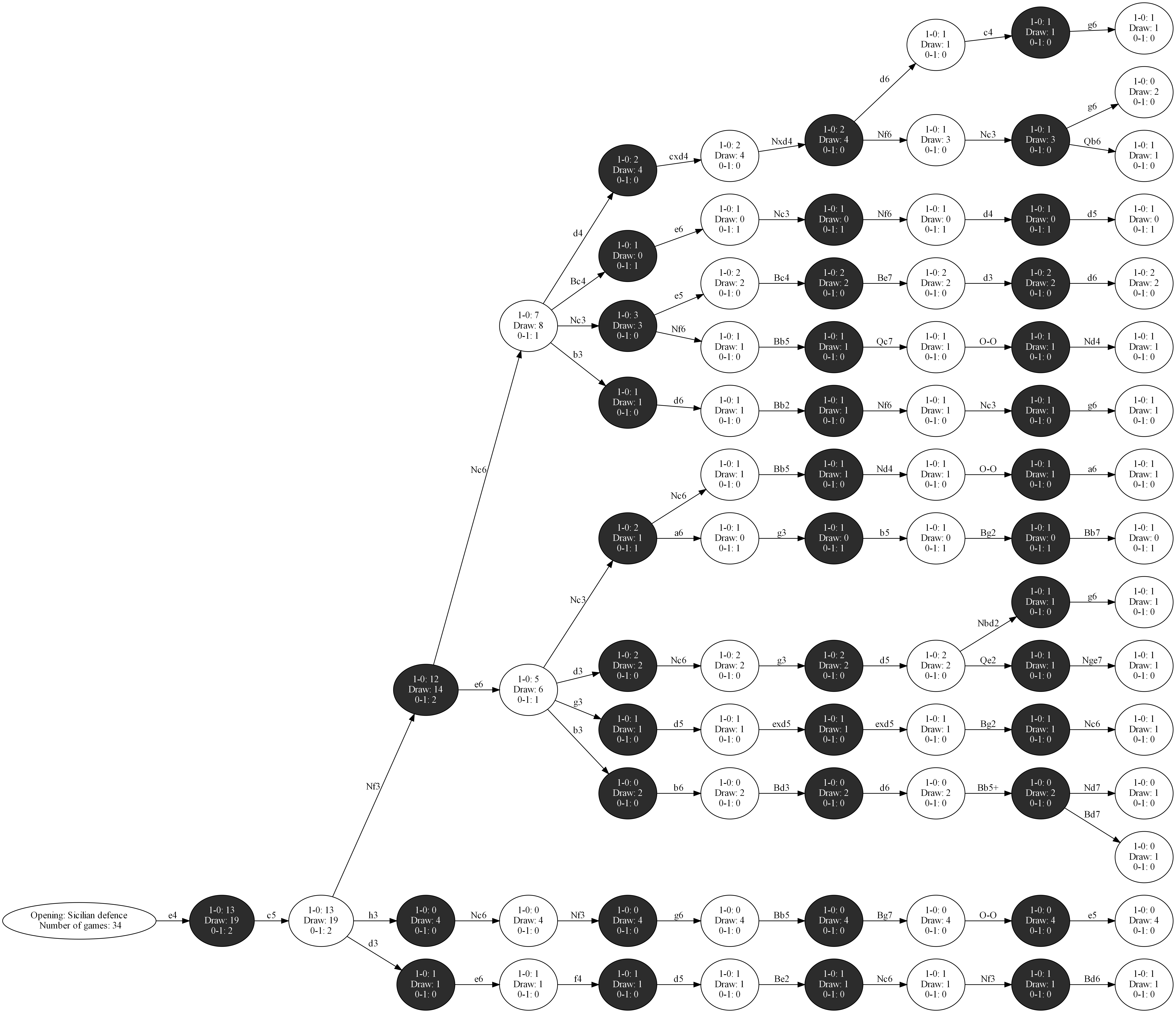
The following table shows the openings that occured at least 40 times.

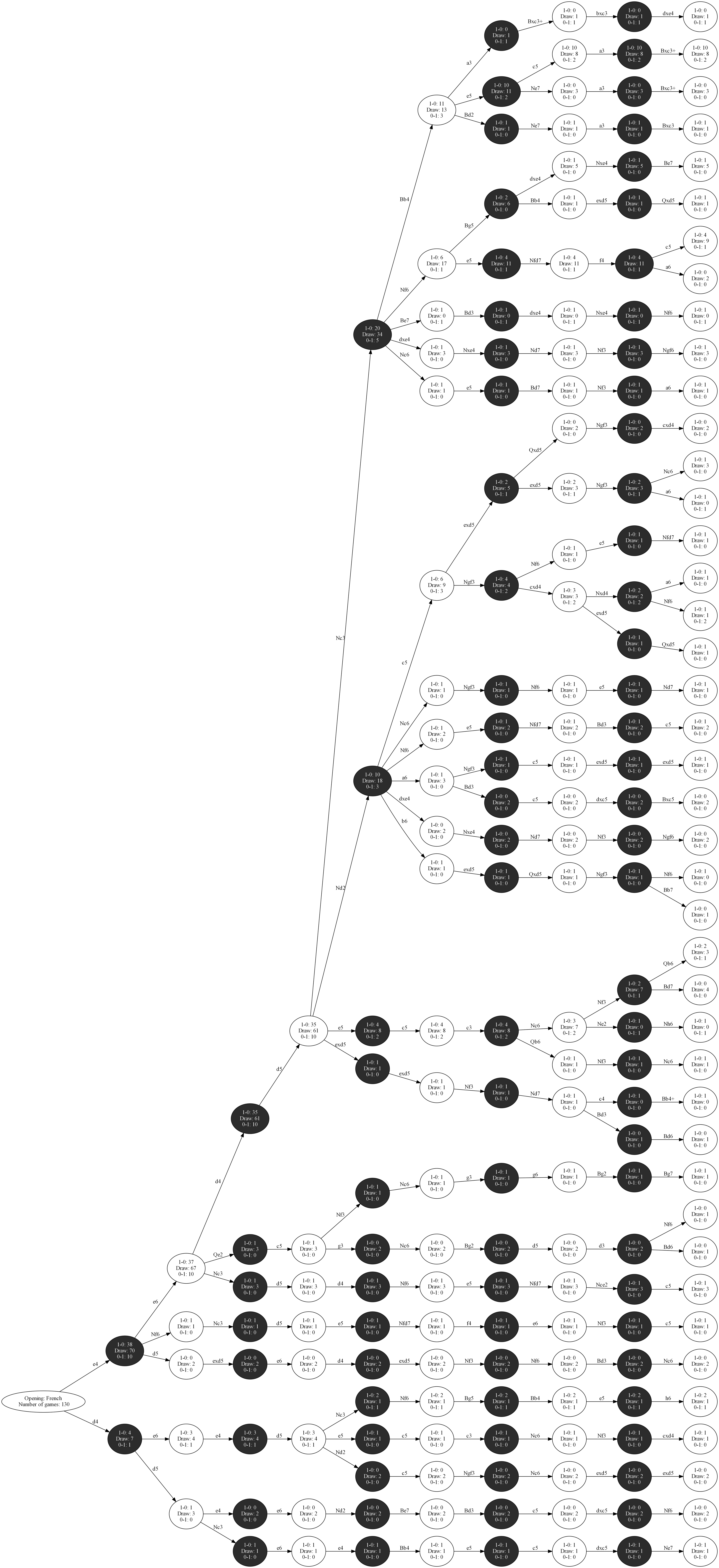
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Opening | White wins | Draws | Black wins | Total games |
| Nimzo-Indian | 22 | 44 | 13 | 79 |
| Sicilian | 151 | 342 | 89 | 582 |
| QGD | 28 | 83 | 9 | 120 |
| Queen's pawn game | 17 | 44 | 8 | 69 |
| French | 42 | 77 | 11 | 130 |
| Ruy Lopez | 47 | 102 | 15 | 164 |
| English opening | 20 | 56 | 12 | 88 |
| Gruenfeld | 8 | 28 | 4 | 40 |
| Reti opening | 12 | 26 | 4 | 42 |
| Caro-Kann | 36 | 75 | 11 | 122 |
| English | 43 | 93 | 17 | 153 |
| Queen's Indian | 26 | 66 | 10 | 102 |
| QGD semi-Slav | 18 | 50 | 8 | 76 |
| King's Indian | 31 | 47 | 7 | 85 |
| QGD Slav | 12 | 36 | 4 | 52 |

# 3 Tree plotting

The following section describes the tree plotting. The tree plotting is done using the Tree class........

We choose to plot the following trees with depth 10, first the Sicilian defence, then the French defence.





# 3. Conclusion

This document is a summary of the chess database.