

# Chapter 1

## Standard Antichess

Antichess is a variant of chess in which the goal is to either lose all of your pieces (except your king) or checkmate your opponent.

### 1.1 The Chessboard

Antichess is played between two opponents by moving pieces on a square board. The board is composed of 64 equal squares. The eight vertical lines of squares are called columns. The eight horizontal lines of squares are called rows. The squares are colored black and white alternately. The lines of squares of the same color, touching corner to corner, are called diagonals. The chessboard is placed between the players in such a way that the near corner to the right of each player is white. The columns are labeled a to h from left to right. The rows are numbered 1 to 8 from bottom to top.

### 1.2 The Pieces

At the beginning of the game, one player ("white") has 16 white pieces, and the other ("black") has 16 black pieces. The white player pieces are: one King (e1), one Queen (d1), two bishops (c1 and f1), two knights (b1 and g1), two rooks (a1 and h1), and eight pawns (row 2). The black player pieces are: one King (e8), one Queen (d8), two bishops (c8 and f8), two knights (b8 and g8), two rooks (a8 and h8), and eight pawns (row 7). The initial position of the pieces on the chessboard is shown in Figure ().

### 1.3 The moves

A move is defined by the following rules:

1. White moves first. The players alternate in making one move at a time until the game is completed.

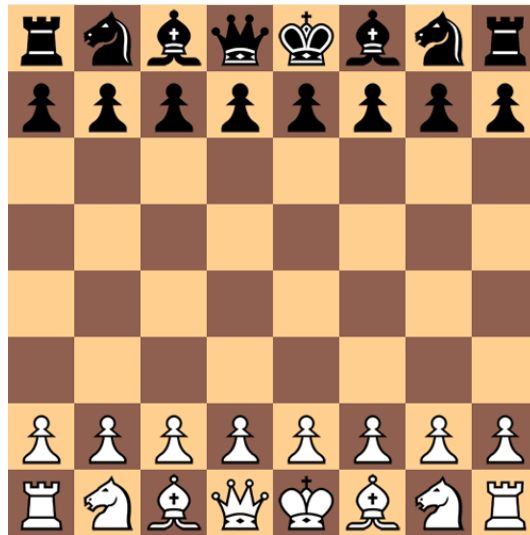


Figure 1.1: Initial position of the pieces

2. A move is the transfer by a player of one of his pieces from one square to another square, which is either vacant or occupied by an opponent's piece.
3. No piece except the knight may cross a square occupied by another piece. That is, only the knight may jump over other pieces.
4. A piece played to a square occupied by an opponent's piece captures that piece as part of the same move. The captured piece is immediately removed from the board.

A player's moves are limited by the following fact: A player is forced to capture an opponent's piece whenever possible. If a player can take several of the opponent's pieces, he/she is free to choose which piece to take. This limitation does not exist in regular chess. The only exception to this rule is being in check.

All the pieces move exactly as they do in standard chess. An excellent description of how each piece moves and captures is at

<http://www.princeton.edu/~jedwards/cif/chess.html>

In the Standard Antichess rules:

- Castling and en passant are **not** allowed.
- When a pawn moves to the last row on the opposing side, it turns into a queen. (In standard chess, such a pawn can be turned into any piece of the player's choice.)

## 1.4 Handling Check Situations

In short, each move of player A must observe the following:

1. If A's king is under check, A must move the king out of check.
2. A cannot move in a way that causes the king to come into check.
3. If A can take one of B's pieces, then it must (unless disallowed by the previous rule).
4. If A's king is under check and A can move in such a way that the king is out of check by either taking B's piece or in some other manner, A must take B's piece.

The king is in check when the square it occupies is attackable by one or more of the opponent's pieces; in this case, the latter is/are said to be checking the king. A player may not make a move which leaves his king on a square attackable by any of his opponent's pieces; e.g., the player cannot move the king into check. Check must be resolved by the move immediately following. If any check cannot be parried, the king is said to be checkmated or mated.

It is the foremost obligation of each player to move the king out of a check. This overrides the rule that you must take an opponent's piece. For example, in the figure below to the left, it is black's turn and black must move its king out of check even though it can take white's bishop on c6 with its rook.

If it is possible for a player to remove the king from check as well take a piece of the opponent, then the player must do so. For example, suppose the black player's king is under check from white's rook. Further, suppose black has two choices to move away from check: remove the check with or without taking a white piece. In that case, black must take white's piece and remove the check. In the figure below to the right, black's king must take the white bishop with the king in the next move (it cannot simply move the king away from check without taking the bishop).

## 1.5 End of Game

Player A wins the game against player B if:

1. all pieces of A except for the king are taken, or
2. player A checkmates player B, or
3. player B's timer runs to 0.

If player A checkmates player B and on the same turn takes the last of player B's non-king pieces, player A wins (ie, the checkmate prevails).

The game is stalemated if the king of the player who has the move is not in check, and this player cannot make any legal move. In the example on the right, black is stalemated on their turn, since neither their pawns nor king can move. In antichess, the stalemated player loses their turn, and the opposing player may continue to take turns until the stalemate is broken or the game is won.

## Chapter 2

# EnCastle Antichess

Castling is a special move that allows a player to move both their king and rook in one turn under certain conditions. It is described towards the end of

<http://www.princeton.edu/~jedwards/cif/basics2.html>

En passant is a special move that pawns can make. It is described towards the end of

<http://www.princeton.edu/~jedwards/cif/basics7.html>

All other rules of standard antichess apply.

## Chapter 3

# Connect N

Connect N is a two players game which takes place on a rectangular board placed vertically between them. Chips of two different colors are used, red for the first player and black for the second player. During a turn, a player drops a chip at the top of the board in one of the columns; the chip falls down and fills the lower unoccupied square. A player cannot drop a chip in a column that is already full.

A value  $n$  is chosen at the beginning of the game ( $n$  has to be greater than 1 and less than the largest of the side dimensions of the board). The red player makes the first move. The object of the game is to connect  $n$  chips vertically, horizontally or diagonally. If the board is filled and no one has aligned  $n$  chips then the game is drawn.<sup>1</sup>

---

<sup>1</sup>Rules for the popular *Connect Four* can be found in <http://www.ce.unipr.it/~gbe/cn4rules.html>

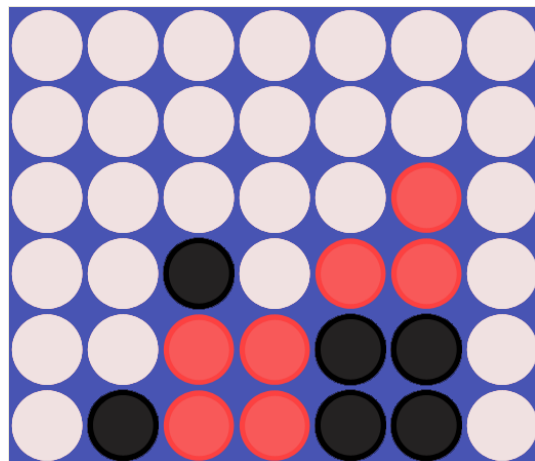


Figure 3.1: Winning position for red player for  $n=4$