

Chapter 1 The Rules of Go

0100 Players

Go is a board game to be played by two players like chess or checker.



The author is playing a game with his grandson about 70 years younger.

0110 Human Players

Normally, two people will play Go together.

0120 Pair Go (Doubles Games)

It is possible to enjoy a game with four people by forming two teams of two players. Then, it resembles a doubles match of table tennis. Each player of a team takes turns to make a move on the board alternately. It is a rule that a player should not exchange words with the partner of the team just like the case of a partner of contract bridge.

0130 Chain GO (Group Games)

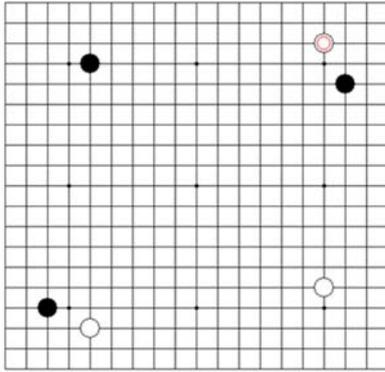
In a big gathering such as a party, people can enjoy a group game on one board by dividing participants to two teams. In this case, one person makes one move and leaves the board. Members take turns to make one move each. In many such occasions, one game will be finished without deciding which is winning or losing as a suspended game as the purpose of the game is an entertainment.

0140 Machine as a player

Today, a number of strong Go playing software programs are available. With a personal computer, you can enjoy games with the software as your opponent. For beginners it is a good idea to obtain a program and practice Go without disturbing anyone else.

0200 Board

In playing a game of Go, you need a board and then stones.



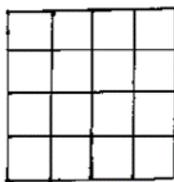
This is a board and you will see that there are six stones placed on the board.

0210 The Standard Board

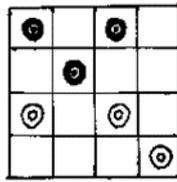
Today, Go is officially played on a board on which there are 19 vertical lines and 19 horizontal lines just like a grid. In many board games such as chess or checker, a similar grid is designed on the board. However the number of vertical lines and horizontal lines may vary from one game to another.

0220 Squares or Intersections?

When you look at a board with a grid on it, there can be two different interpretations. Please look at the boards shown in the illustrations below.



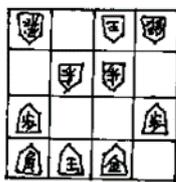
4x4 or 5x5?



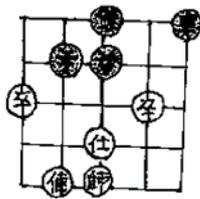
Checker



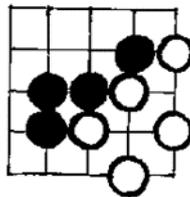
Western Chess



Japanese chess



Chinese and
Korean chess

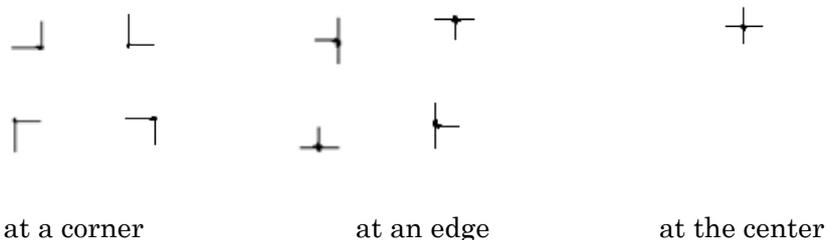


Go

In one interpretation, you can recognize that there are $4 \times 4 = 16$ squares on the board. In fact, checker players, Western Chess players and Japanese Chess players look at the board that way. However, there is another interpretation, that is, to consider that the same board has $5 \times 5 = 25$ intersections of lines on the board. Chinese and Korean Chess players look at the board that way. Go is a game in which players look at the board in this manner.

If you look at a normal Go board first without realizing the game of Go, you may say that there are 324(=18x18) squares. But once you learn Go, you will consider that there are 361(=19x19) intersections forgetting about squares.

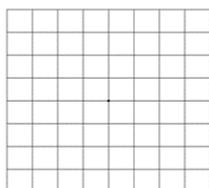
Three patterns of intersections



0230 A Smaller Board

As mentioned in the section 0201, an official board has 19 vertical lines and 19 horizontal lines. However, it is possible to try to play a game of Go with a larger board such as 21x21 or 37x37 or a smaller board such as 13x13, 9x9, or even 7x7 with the same rules of Go. For beginners, it is easier to learn and practice the game using a smaller board since the game will inevitably get more complicated as the number of lines gets larger and it needs longer time to finish a game.

Interestingly, even very strong players such as professionals can enjoy games on a smaller board such as 9x9.



This is a 9x9 board.

0240 The Size of a Board

The physical size of a board can be large or small depending on the size of the pieces (in case of Go, they are called stones) to be used with it. In principle, a Go board will take the form of a square if the number of vertical lines and that of horizontal lines are the same. In Japan, interestingly, the tradition is make a board in a rectangular shape which is slightly longer than a complete square. The standard size of a board is said to be 42.42cm wide and 45.45 cm long assuming that they use round stones of 2.21cm diameter.

With a board of this size, as you can calculate, 19 stones can be laid sideways on the board without overlapping. ($2.12 \times 19 = 40.28 = 42.42 - 2.14$) This means that vertical line 1 and 19 may be drawn at 1.07cm away from the left and right edges of the board so that stones will be settled on the board in a stable manner. Mathematically speaking,

horizontal lines may be drawn in intervals of $45.45/42.42 = 15/14$ which means 6.67% wider than intervals of vertical lines.

0250 Material of a Board

In Japan, most typically, boards are made of wood. However, it is possible to make a board with cardboard, paper, cloth, synthetic leather, etc. Unlike chess board, glass, marbles, mosaic, or plastic boards are rather rare.

0300 Stones

In Go, they use many pieces to be placed on a board. They are called stones.



Set of Chinese stones. You will note that the containers have no lids.

0310 Shapes of Stones

Stones are round and flat like a disk. In Japan, a stone is like a convex lens with some thickness at the center. A typical Chinese stone is round on top like a lens but rather flat on its bottom side. In this case, stones are placed on the board with its flat side downwards.

By the way, if stones are in the shape of a square just like a piece of tile, what will happen? Theoretically, a game can be played in the same way. But it is inconvenient to remove an existing stone from a board during the game. Nevertheless, there is an advantage, namely, if pieces are in the shape of squares, it becomes visually very distinct when two stones are connected sitting on neighboring intersections since two adjacent pieces will form a flat rectangle. Despite this advantage, we have never seen square stones used in the game of Go!

0320 Color of Stones

Officially they use stones of white color and stones of black color for two players. In theory, they can be red and white, or any other distinct color. But we have never seen such colored stones. Once a weak-sighted person invented a set of stones with dark green and greenish white stones which was considered mild for your eyes. We hear

that green and red stones are painful for eyes as the color contrast is too sharp and it is said that you may suffer headache if you play a game with this set.

0330 Number of Stones Needed for a Game

Normally, as a set, they provide 361 stones in total, the same number as the number of intersections on the board. A set consists of 181 black stones and 180 white stones. In regular games, that number is sufficient to finish a game. However, during a game of Go, stones are captured by your opponent under certain conditions and captured stones are removed from the board. For this reason, there are rare cases in which 361 stones may become insufficient. When both players have shortage, then, it is possible to exchange the same number of captured stones to continue the game. Then, what will happen if one player needs more stones and he does not have sufficient captured stones? We have never heard of this situation to have occurred in actual games. Maybe it is because this situation occurs only when a game is hopelessly one sided and the losing player will resign before he realizes that he is going to suffer from shortage of his stones.

0340 Material of Stones

Traditionally, Japanese white stones are made of shells of clams and black stones are made of black rocks ground into their shapes. Today stones are often made of glass which is convenient enough. Plastic stones are less costly but sometimes found too light. In China, high class stones are made of gem stones.

0350 The Size of Stones

The ideal size of a stone is such that a stone can settle in a square of a board. In case of a standard Japanese board, the standard size of a stone is 2.21cm in its diameter.

In China, the size of stones may vary according to the board they are expected to use with them. When the author obtained a set of stones in China and brought home, they were found so large that it was found physically impossible to lay them on the Japanese standard board properly.

0360 Bowls or Containers of Stones

Stones are usually kept in a large container holding all stones of one color. This means you need two stone containers as a set.

The lid of the container plays an important role to be kept at the side of the container placed upside down during the game so that a player can keep the captured opponent's stones in it. Captured stones are important in counting scores in the Japanese rules. In the Chinese rules, they can ignore captured stones. Therefore, Chinese stone containers often have no lids.

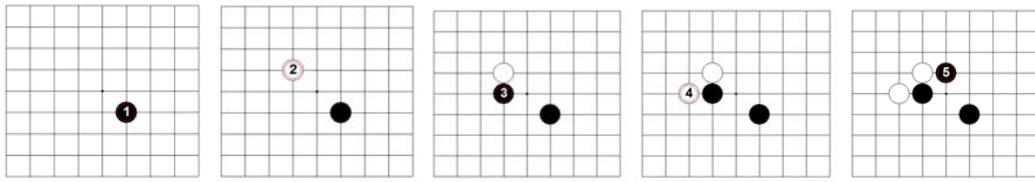


A set of Japanese stones. The lids of containers are used to keep captured stones.

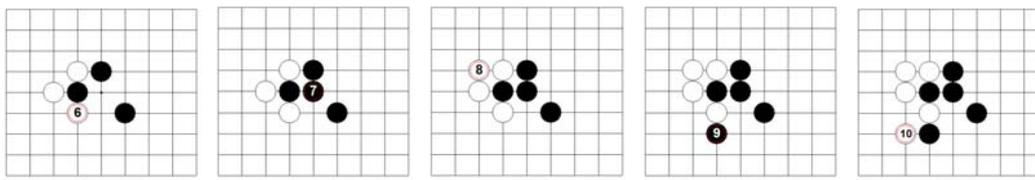
0400 A Sample Game

At this point, we wish to show you a sample game on a small board of 9x9. The purpose of it is simply to give you chance to observe a game without knowing the game too well. You need not understand what is happening on the board but it may be a good experience to watch a game before you learn the details of the game.

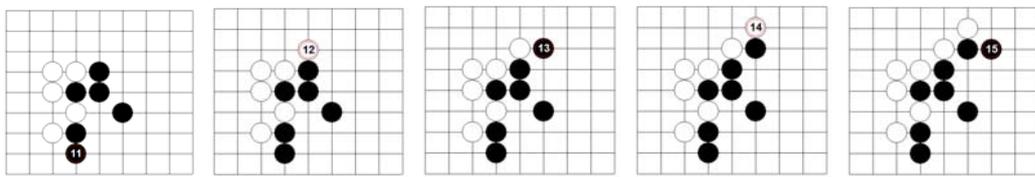
For the readers to make it easier to follow the moves, a number indicating the sequence of moves will be shown here for your convenience. However, in actual games, there is no number shown on a stone, of course.



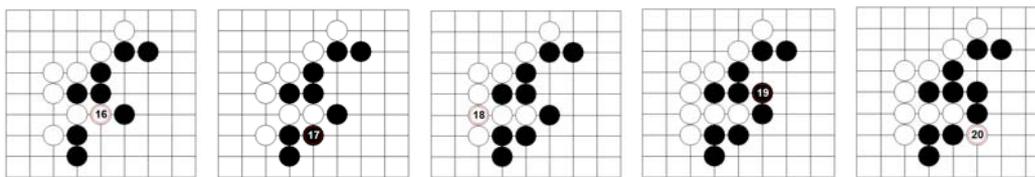
Black started. White responded. Black responded.



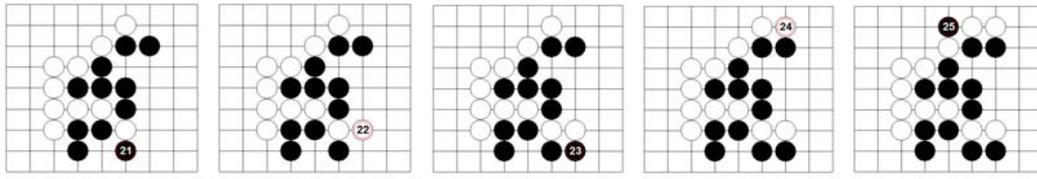
The number of stones on the board is increasing.



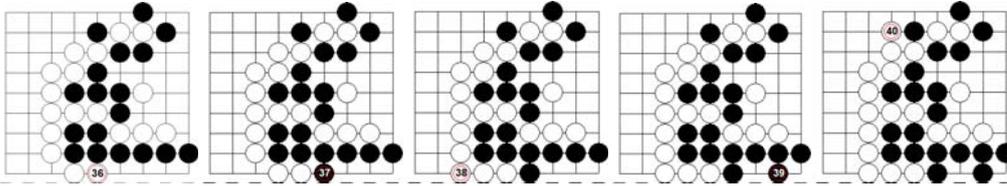
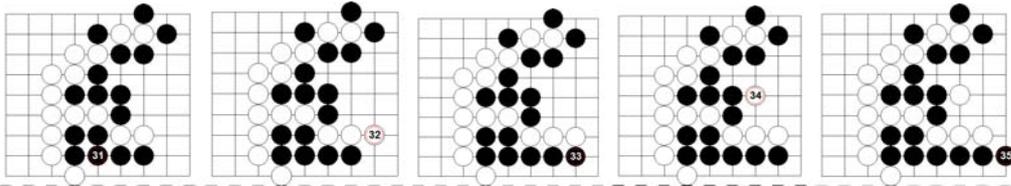
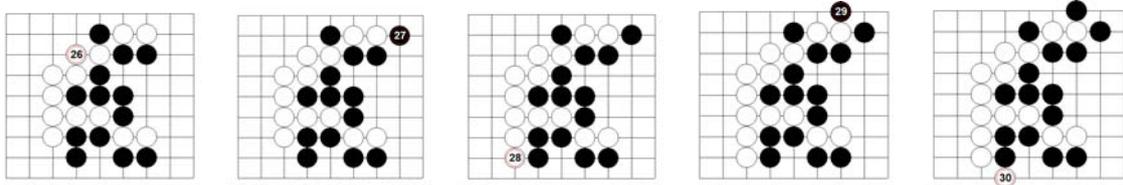
You see that, by and large, left hand side of the board is becoming the white's territory.



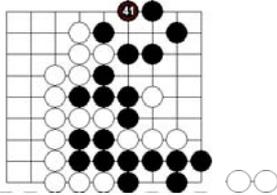
And the right hand side is becoming the black's territory.



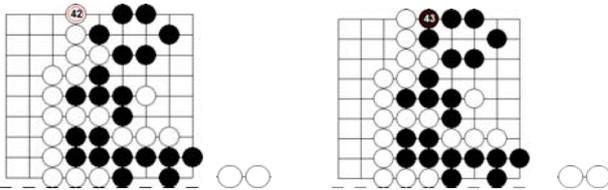
What will happen as a few white stones came inside the black's territory?



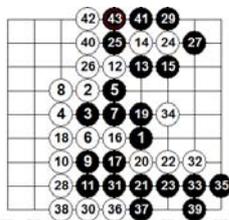
White gave up a few stones inside the right hand black's territory.



Two white stones were removed from the board. Why?



At this point, both players recognized that there is no place to make a further move and agreed that the game is over.



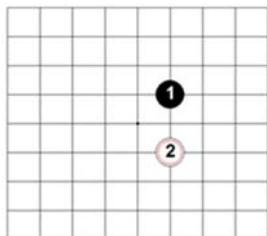
Please look at the above chart. This is a typical form of a game record of a game.

0500 Basic Rules of Go.

The basic rules of Go are quite simple.

0510 Article 1.

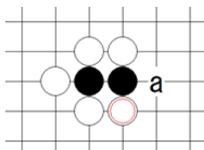
Black and White shall make a move alternately. (A move means placing of a stone at a vacant intersection of the board.)



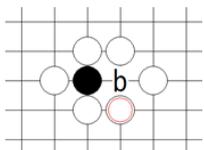
After Black's move (1) and then White's move (2), now is Black's turn for (3).

0520 Article 2.

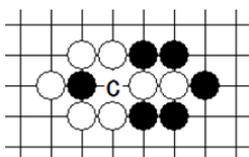
Suffocated stones shall be regarded dead and removed from the board.



White's move at "a" will kill two black stones.



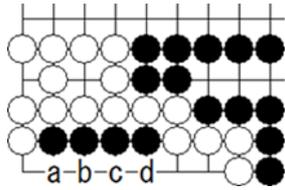
Black's suicide move at "b" is not permitted.



Note. As you can see, this is a little complicated situation. Can Black play at C? You may say "no." since C is a suicide move for the Black. However, in this situation, Black shall be permitted to play at C, for the reason that the move at C, although it is a suicide move, it is, at the same time, killing your opponent's stone(s). When a suicide and killing occur at the same time, killing precedes because your stones will not be suffocated at the moment your opponent's stones have been removed.

0530 Article 3

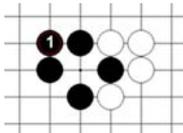
Prisoners shall be regarded dead just like suffocated stones and removed from the board at the end of the game.



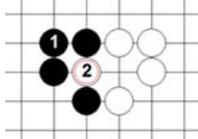
Black's four stones are prisoners and shall leave the board without White's moves at "a, b, c and d". The full understanding of this article is of essential importance to play a game according to the Japanese rules.

0540 Article 4.

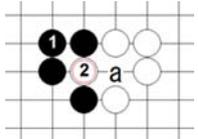
Reappearance of the same board pattern is not permitted.



Black's (1) is OK.



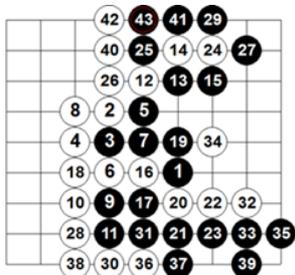
White's (2) is OK and the white captured one black stone.



But, Black's (3) at "a" is not allowed since the board pattern after that (3) would be exactly the same as at (1) as you can see.

0550 Article 5.

Total number of vacant intersections of your territory plus the total number of your captured stones of your opponent shall be your score.



This shows the result of the game illustrated in the last section, which started with Black's move (1) and finished at Black's move (43).

White's territory on the left=21. White captured no stones. White's total point is 21. Black's territory on the right=23. Black captured 2 stones. There are 4 prisoners. Black's total point is 29.

Black won by 8 points.

0560 A Note for the Chinese Rules:

Article 3 is not needed in the Chinese Rules.

Article 5 is worded as

“Total of the number of vacant intersections of your territory plus the total of the number of your surviving stones on the board shall be your score.”)

The above game is scored as follows:

White’s territory =21. White’s living stones=15. White’s total point is 36.

Black’s territory= 23. Black’s living stones=22. Black’s total point is 45.

Black won by 9 points. Note that the 1 point difference between the two rules came from the fact that the last move of the game was Black’s move (43). If the last move had been White’s, the scores of the game in two rules would have been exactly the same. In this manner, Japanese and Chinese rules are basically not too different.

0570 A Note on the Variation of Rules

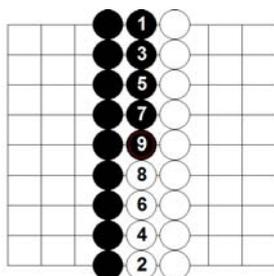
This section is pretty technical and maybe it is wise for you to skip reading it at a glance.

Only if you are curious, you may be interested in reading this section.

Basically, there are two rules popular today, the Japanese rules and the Chinese rules as described above. However, there are many varieties of rules with slight differences which are worth mentioning.

One basic rule is the pure ancient rules, which we can recognize as the basis of the present Chinese rules. Today, the territories and stones are counted in the Chinese rules. In the pure ancient rules, only stones are counted. This means that players will continue placing their stones in their own territories until the moment the group of stones are left with two separate vacant points. After this phase, the group of stones would be killed if you were to place a stone at one of the two vacant points.

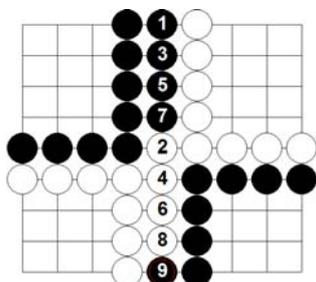
See the following charts: After black and white placed 9 stones each to form a wall, The black and white tried to place their stones between the walls from the move (1) to move (9). Now you can count the score with the Chinese rules. Black’s territory is 27 and black’s stones 14 and the total black score is 41. White’s territory is 27 and white’s stones 13 and the total white score is 40. Black won by 1 point in the Chinese rules.



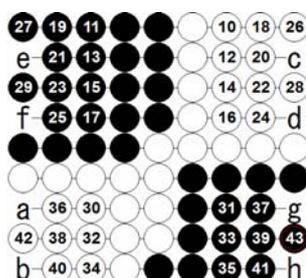
In the pure ancient rules the game will go on as white will play move (10) to move (58) and the black will play move (11) to move (59). Note that the white's move at (56) and also the black's move at (57) are important to keep two separate vacant points. The white can not fill in "a" or "b" since that will be a suicidal move. Black can not fill in "c" or "d" for the same reason. Therefore the game is over and there are 39 black stones and 38 white stones on the board. The result is black's winning by 1 point, so far, the same result as with the present Chinese rules.

However, the score is not always the same! See the following charts:

After the black and white placed 15 stones each, they continued to place stones between the walls and played from move (1) to move (9). In the present Chinese rules, black wins by one point as you can confirm from the chart. However, in the pure ancient rules, the result would be different.



Black wins by 1 point
in the present Chinese rules.

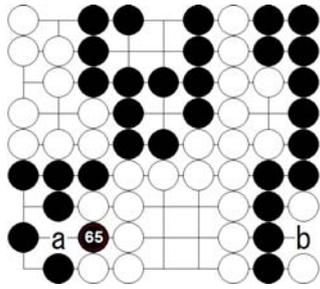


White will win by 1 point
in the pure ancient rules.

(Draw! in the Japanese rules.)

Let us assume that white continued to play from (10) to (42) while black continued to play from (11) to (43). At this point, black cannot play at "e", "f", "g" or "h" since they are all suicidal moves. However, white would be able to continue placing stones at "a" and "b" without any risk of capture. Thus the result would be white's winning by one point! This comes from the fact that white succeeded in connecting two group of stones into one group by moves (2) and (4). In this manner, the pure ancient rule and Chinese rules may result in different scoring.

There are a few interesting rules. A successful business person, Mr. Ing Chang Ki, invented a good logical Go rule and started Ing Cup Games in 1989. This rule and New Jealander rules have an interesting feature. In their rules, a suicide move with which your own stone or stones get suffocated is permitted. This feature is respectable in that the rules will be simpler as the suicide prohibition clause can be removed. In case such a suicide move is permitted, a player can make a move which brings your stone or a group of stones completely suffocated. However, such a move will force suffocated stone or group of stones to be removed from the board before the opponent is to make the following move. This means such a suicide move is almost always a very poor move. However, there is one exception to this basic understanding.



See the above chart. It is a little complicated situation, but not a truly rare case. The black has played (65) capturing a stone at “a”. By the rule, white’s move at “a” to capture (65) is not permitted by the rule. In the present Japanese and Chinese rules, white’s move at b is a suicide move which is not permitted by the rule. Thus white has no meaningful moves to make on the board and black will be able to play at “a” to make the black group of the lower left corner alive. The black will win the game. However, in Ing rules or New Zealander rules, white is allowed to make a move at “b”. It is a suicide move and the stone at “b” and two white stones above and below it will all be instantly removed from the board as dead stones. But, black then needs a move at “b” to make that black group survive. Otherwise, white’s next move at “b” will kill all black stones at the lower right corner. Thus to the white’s move (66) at “b”, black must respond at (67) at “b”. Then white is permitted to play (68) at “a” to capture the stone (65). Now, the black is not allowed to make a move at (65) to capture “a” by the rule. On top, black can find no meaningful moves on the board and ultimately the white will be able to play at (65) to kill the entire group of black stones at the lower left corner. The result will be the white’s big victory.

These situations are very special but you cannot ignore them. Our conclusion at this point is that the rules adopted should be clearly announced before an official game is to be played since there are cases where the winner is different due to the difference of scoring or rules.