Examples for Ikeda Territory I Scoring - Part 4

by Robert Jasiek

Regular Dead Kos

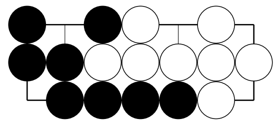
For the purpose of this section, a "ko" is a pair of two adjacent intersections on that a succession of two alternating plays could recreate the position, provided this would be allowed. A "regular dead ko" is a ko that perfect play will dissolve inevitably in favour of one particular player, that is within, i.e. not at a boundary, of what traditional Go theory calls area of that player's independently alive strings, and so that perfect play does neither fill one eye of a previously so called living two-liberty group nor do something similar in a so called seki.

Notes for the theoretically interested reader: This is not a formal, general definition. However, here it is sufficient to understand why an example is in this section. For simplicity, a ko is also called a dead ko if it contains a ko stone of the player that can dissolve the ko in his favour and if thus only an opposing play would provide some so called dead stone that then could be removed. Tradition for the name "dead ko" is rather short because the author has invented this term just a couple of years ago. It has been a necessary invention because many much less frequent ko shapes had been called by names while the rather frequent dead ko shapes had not been given a name yet. The previous illiteracy had consequences: Mostly study of the shapes had been thoroughly neglected, except by a handful of modern rules experts.

It may be surprising, but propositions about divided positions and pass-fights apply also to positions with dead kos because, after the filling of two-sided dame and teire, the positions are divided and, in the propositions, perfect play does not distinguish whether or whether not some plays are ko captures. As a consequence, pass-fights do not occur in any of the examples.

Needless to say, removals should not be done during the alternation if they could be postponed until the playout. Otherwise one loses points by filling some of one's own territory intersections. Of course, removals due to agreement is possible during the agreement phase.

Example 1



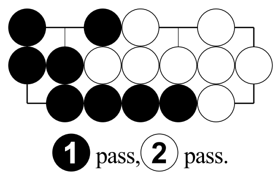
General Information

- diagram index: 0029
- traditional description: "dead ko"
- board size: 7x3
- board parity: odd
- black - white stones: 0
- to move: Black
- frequency: 1:1 to 1:10
- total reading time: <1m
- perfect play score: -21
- pass-fight: none

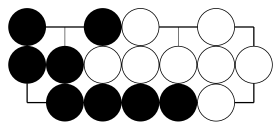
Variation 1

This is a possible perfect play.

Alternation

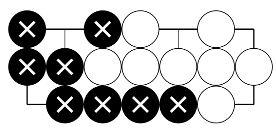


Position at the End of the Alternation

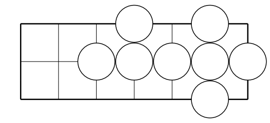


Agreement

The players agree to remove the marked strings.



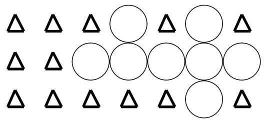
Position at the End of the Agreement



prisoner stones: 8 black, 0 white

Scoring

There are 8 black and 0 white prisoner stones.



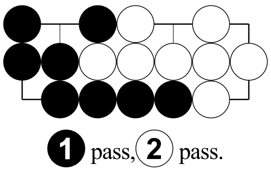
(0 + 0) - (13 + 8) = -21

Black's score consists of 0 points of territory and 0 white prisoner stones. White's score consists of 13 points of territory and 8 black prisoner stones.

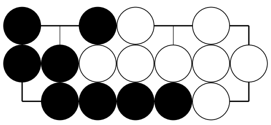
Variation 2

This is a possible perfect play.

Alternation



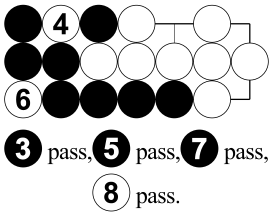
Position at the End of the Alternation



Agreement

The players disagree in the agreement phase.

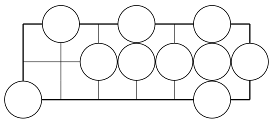
Playout



stones paid for passes: 3 black, 1 white
stones removed: 8 black, 0 white

There is an equal number of moves in this playout. So also the last pass is costly.

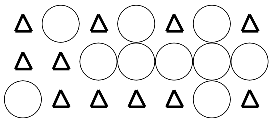
Position at the End of the Playout



prisoner stones: 11 black, 1 white

Scoring

There are 11 black and 1 white prisoner stones.



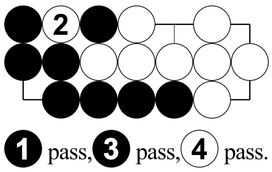
(0 + 1) - (11 + 11) = -21

Black's score consists of 0 points of territory and 1 white prisoner stone. White's score consists of 11 points of territory and 11 black prisoner stones.

Variation 3

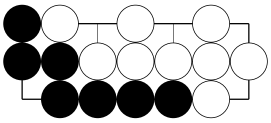
Move 2 is a strategic mistake.

Alternation



Position at the End of the Alternation

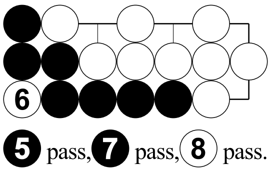
There are 1 black and 0 white prisoner stones.



Agreement

The players disagree in the agreement phase.

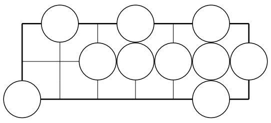
Playout



stones paid for passes: 2 black, 1 white
earlier prisoner stones: 1 black, 0 white
new stones removed: 7 black, 0 white

There is an equal number of moves in this playout. So also the last pass is costly.

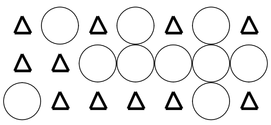
Position at the End of the Playout



prisoner stones: 10 black, 1 white

Scoring

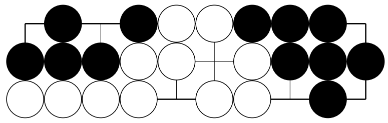
There are 10 black and 1 white prisoner stones.



(0 + 1) - (11 + 10) = -20

Black's score consists of 0 points of territory and 1 white prisoner stone. White's score consists of 11 points of territory and 10 black prisoner stones.

Example 2



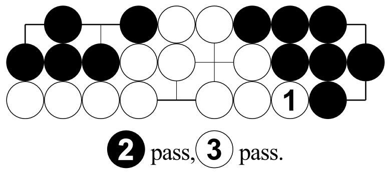
General Information

- diagram index: 0030
- traditional description: "dead ko and one two-sided dame"
- board size: 10x3
- board parity: even
- black - white stones: 1
- to move: White
- frequency: 1:1 to 1:10
- total reading time: <1m
- perfect play score: -12
- pass-fight: none

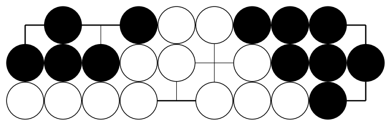
Variation 1

This is a possible perfect play.

Alternation

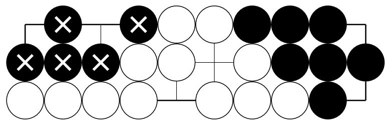


Position at the End of the Alternation

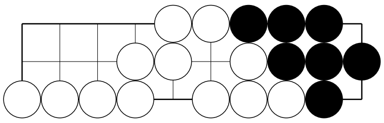


Agreement

The players agree to remove the marked strings.



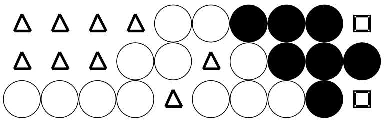
Position at the End of the Agreement



prisoner stones: 5 black, 0 white

Scoring

There are 5 black and 0 white prisoner stones.



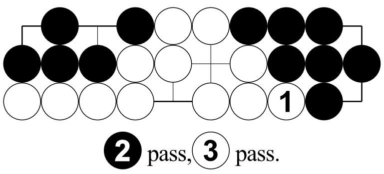
(2 + 0) - (9 + 5) = -12

Black's score consists of 2 points of territory and 0 white prisoner stones. White's score consists of 9 points of territory and 5 black prisoner stones.

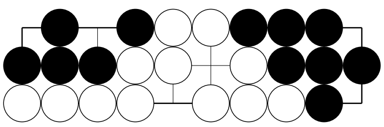
Variation 2

This is a possible perfect play.

Alternation



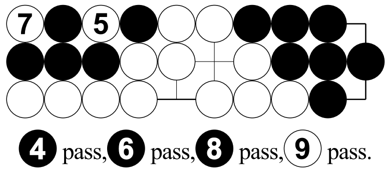
Position at the End of the Alternation



Agreement

The players disagree in the agreement phase.

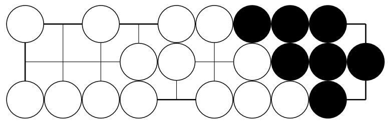
Playout



stones paid for passes: 3 black, 1 white
stones removed: 5 black, 0 white

There is an equal number of moves in this playout. So also the last pass is costly.

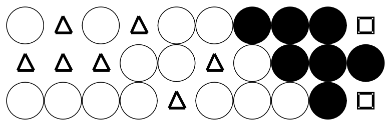
Position at the End of the Playout



prisoner stones: 8 black, 1 white

Scoring

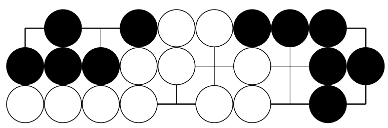
There are 8 black and 1 white prisoner stones.



(2 + 1) - (7 + 8) = -12

Black's score consists of 2 points of territory and 1 white prisoner stone. White's score consists of 7 points of territory and 8 black prisoner stones.

<u>Example 3</u>



General Information

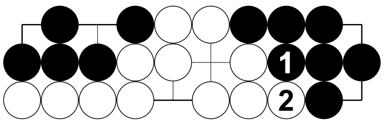
- diagram index: 0031
- traditional description: "dead ko and two two-sided dame"
- board size: 10x3
- board parity: even
- black - white stones: 0
- to move: Black
- frequency: 1:1 to 1:10

- total reading time: <1m
- perfect play score: -12
- pass-fight: none

Variation 1

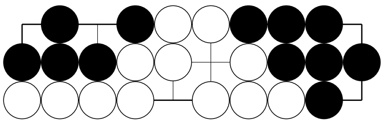
This is a possible perfect play.

Alternation



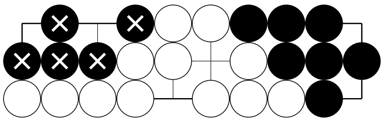
3 pass, 4 pass.

Position at the End of the Alternation

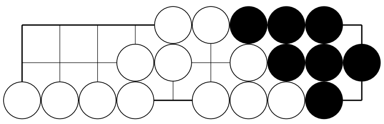


Agreement

The players agree to remove the marked strings.



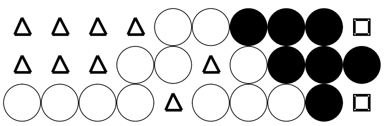
Position at the End of the Agreement



prisoner stones: 5 black, 0 white

Scoring

There are 5 black and 0 white prisoner stones.



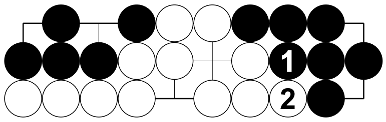
(2 + 0) - (9 + 5) = -12

Black's score consists of 2 points of territory and 0 white prisoner stones. White's score consists of 9 points of territory and 5 black prisoner stones.

Variation 2

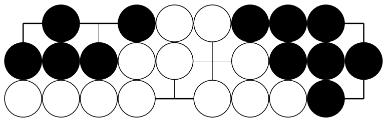
This is a possible perfect play.

Alternation



3 pass, 4 pass.

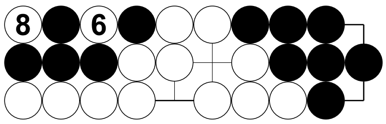
Position at the End of the Alternation



Agreement

The players disagree in the agreement phase.

Playout

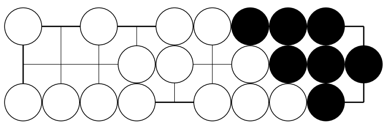


5 pass, 7 pass, 9 pass, 10 pass.

stones paid for passes: 3 black, 1 white
stones removed: 5 black, 0 white

There is an equal number of moves in this playout. So also the last pass is costly.

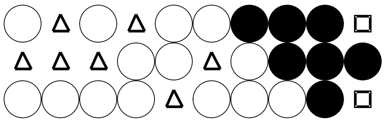
Position at the End of the Playout



prisoner stones: 8 black, 1 white

Scoring

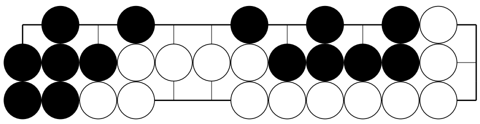
There are 8 black and 1 white prisoner stones.



(2 + 1) - (7 + 8) = -12

Black's score consists of 2 points of territory and 1 white prisoner stone. White's score consists of 7 points of territory and 8 black prisoner stones.

Example 4



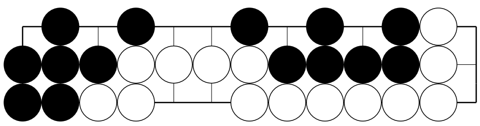
General Information

- diagram index: 0032
- traditional description: "two separate dead kos"
- board size: 13x3
- board parity: odd
- black - white stones: 0
- to move: Black
- frequency: 1:1 to 1:100
- total reading time: <1m
- perfect play score: -39
- pass-fight: none

Variation 1

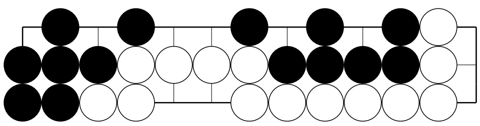
This is a possible perfect play.

Alternation



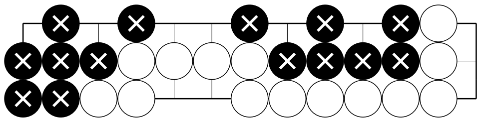
1 pass, 2 pass.

Position at the End of the Alternation

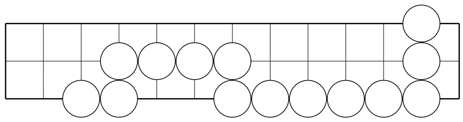


Agreement

The players agree to remove the marked strings.



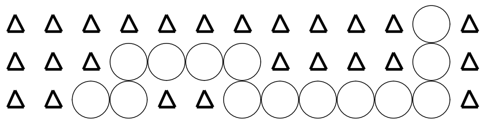
Position at the End of the Agreement



prisoner stones: 14 black, 0 white

Scoring

There are 14 black and 0 white prisoner stones.



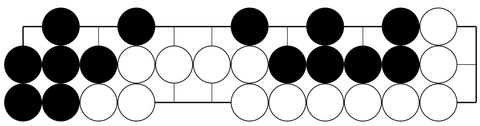
(0 + 0) - (25 + 14) = -39

Black's score consists of 0 points of territory and 0 white prisoner stones. White's score consists of 25 points of territory and 14 black prisoner stones.

Variation 2

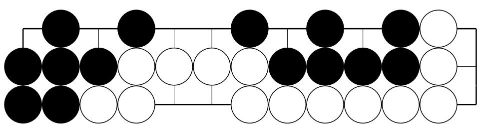
This is a possible perfect play.

Alternation



1 pass, 2 pass.

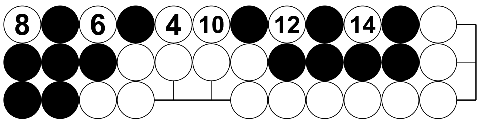
Position at the End of the Alternation



Agreement

The players disagree in the agreement phase.

Playout

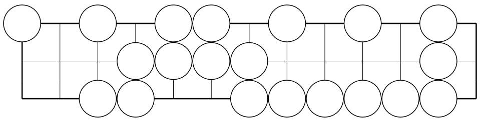


3 pass, 5 pass, 7 pass, 9 pass, 11 pass, 13 pass, 15 pass, 16 pass.

stones paid for passes: 7 black, 1 white
stones removed: 14 black, 0 white

There is an equal number of moves in this playout. So also the last pass is costly.

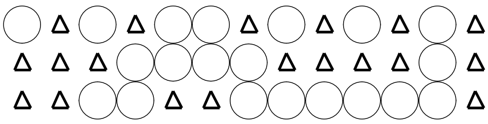
Position at the End of the Playout



prisoner stones: 21 black, 1 white

Scoring

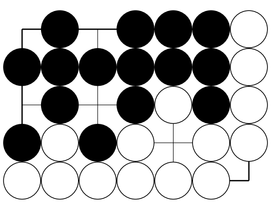
There are 21 black and 1 white prisoner stones.



(0 + 1) - (19 + 21) = -39

Black's score consists of 0 points of territory and 1 white prisoner stone. White's score consists of 19 points of territory and 21 black prisoner stones.

Example 5



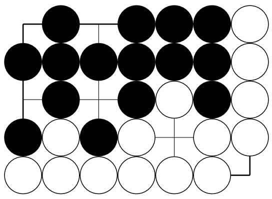
General Information

- diagram index: 0033
- traditional description: "three dead kos"
- board size: 7x5
- board parity: odd
- black - white stones: 1
- to move: White
- frequency: 1:1 to 1:1,000
- total reading time: <1m
- perfect play score: 34
- pass-fight: none

Variation 1

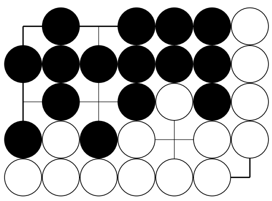
This is a possible perfect play.

Alternation



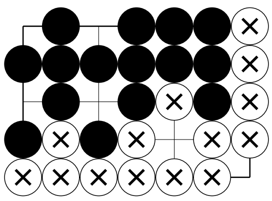
1 pass, 2 pass.

Position at the End of the Alternation

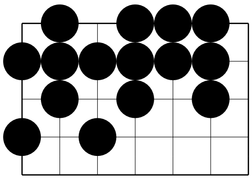


Agreement

The players agree to remove the marked strings.



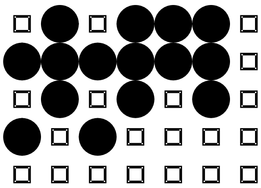
Position at the End of the Agreement



prisoner stones: 0 black, 14 white

Scoring

There are 0 black and 14 white prisoner stones.



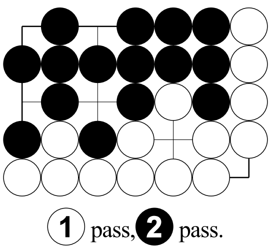
(20 + 14) - (0 + 0) = 34

Black's score consists of 20 points of territory and 14 white prisoner stones. White's score consists of 0 points of territory and 0 black prisoner stones.

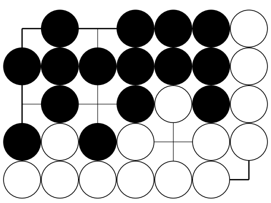
Variation 2

This is a possible perfect play.

Alternation



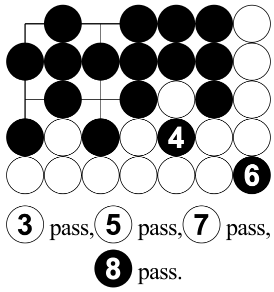
Position at the End of the Alternation



Agreement

The players disagree in the agreement phase.

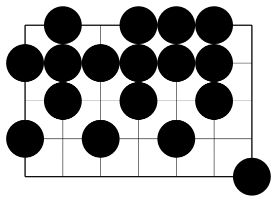
Playout



stones paid for passes: 1 black, 3 white
stones removed: 0 black, 14 white

There is an equal number of moves in this playout. So also the last pass is costly.

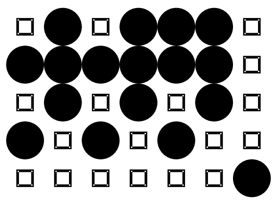
Position at the End of the Playout



prisoner stones: 1 black, 17 white

Scoring

There are 1 black and 17 white prisoner stones.



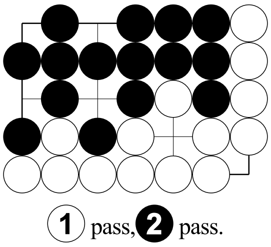
(18 + 17) - (0 + 1) = 34

Black's score consists of 18 points of territory and 17 white prisoner stones. White's score consists of 0 points of territory and 1 black prisoner stone.

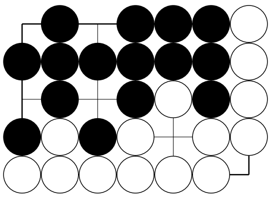
Variation 3

This is a possible perfect play.

Alternation



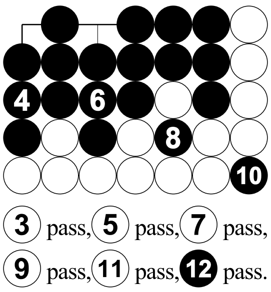
Position at the End of the Alternation



Agreement

The players disagree in the agreement phase.

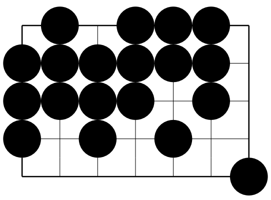
Playout



stones paid for passes: 1 black, 5 white
stones removed: 0 black, 14 white

There is an equal number of moves in this playout. So also the last pass is costly.

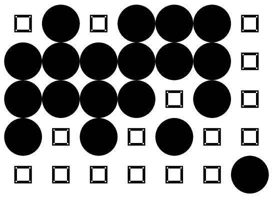
Position at the End of the Playout



prisoner stones: 1 black, 19 white

Scoring

There are 1 black and 19 white prisoner stones.



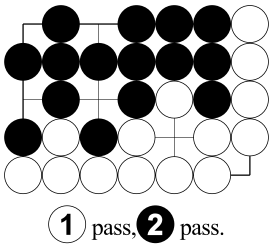
(16 + 19) - (0 + 1) = 34

Black's score consists of 16 points of territory and 19 white prisoner stones. White's score consists of 0 points of territory and 1 black prisoner stone.

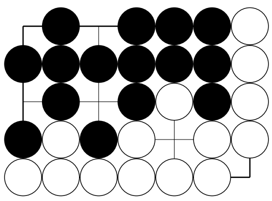
Variation 4

This is a possible perfect play.

Alternation



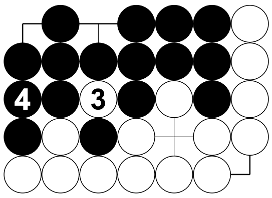
Position at the End of the Alternation



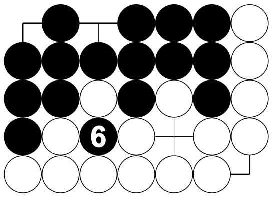
Agreement

The players disagree in the agreement phase.

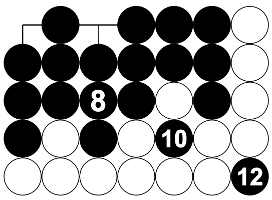
Playout



5 pass.



7 pass.



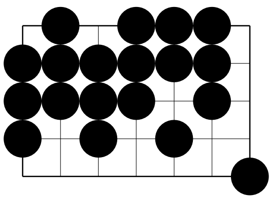
9 pass, 11 pass, 13 pass,

14 pass.

stones paid for passes: 1 black, 5 white
stones removed: 1 black, 15 white

There is an equal number of moves in this playout. So also the last pass is costly.

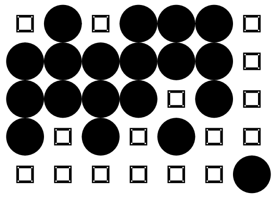
Position at the End of the Playout



prisoner stones: 2 black, 20 white

Scoring

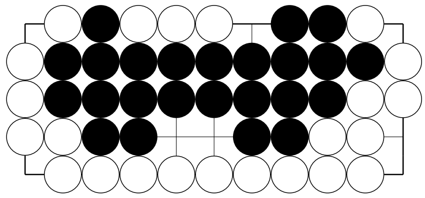
There are 2 black and 20 white prisoner stones.



(16 + 20) - (0 + 2) = 34

Black's score consists of 16 points of territory and 20 white prisoner stones. White's score consists of 0 points of territory and 2 black prisoner stones.

<u>Example 6</u>



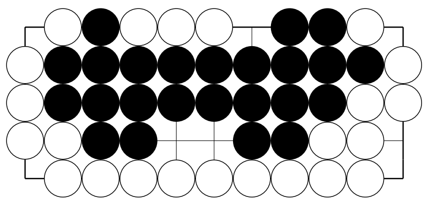
General Information

- diagram index: 0034
- traditional description: "dead string next to two dead kos"
- board size: 11x5
- board parity: odd
- black - white stones: 1
- to move: White
- frequency: 1:10 to 1:1,000
- total reading time: 2m
- perfect play score: -56
- pass-fight: none
- acknowledgement: Makrai Jozsef

Variation 1

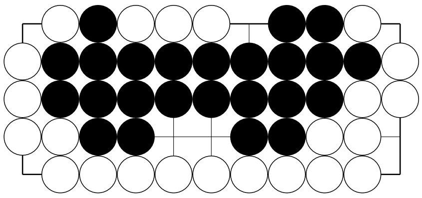
This is a possible perfect play.

Alternation



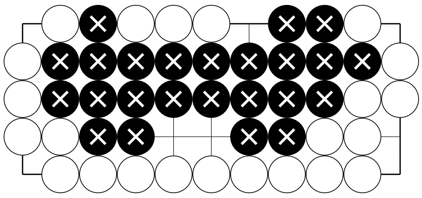
1 pass, 2 pass.

Position at the End of the Alternation

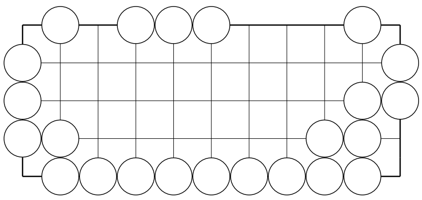


Agreement

The players agree to remove the marked string.



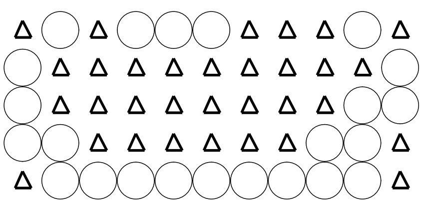
Position at the End of the Agreement



prisoner stones: 24 black, 0 white

Scoring

There are 24 black and 0 white prisoner stones.



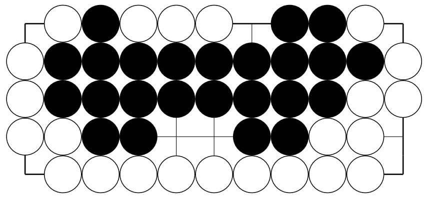
(0 + 0) - (32 + 24) = -56

Black's score consists of 0 points of territory and 0 white prisoner stones. White's score consists of 32 points of territory and 24 black prisoner stones.

Variation 2

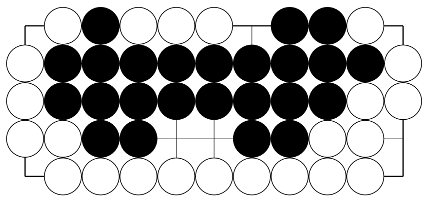
This is a possible perfect play. Move 13 should be a play and not a pass so that under the positional superko rule together with the rule about two successive ending passes the play 15 becomes possible.

Alternation



1 pass, 2 pass.

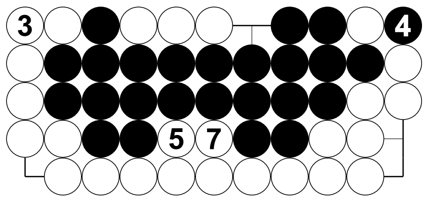
Position at the End of the Alternation



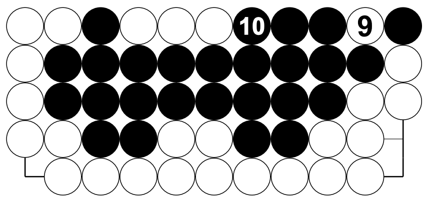
Agreement

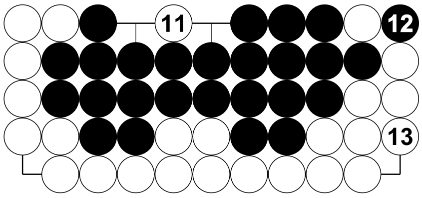
The players disagree in the agreement phase.

Playout

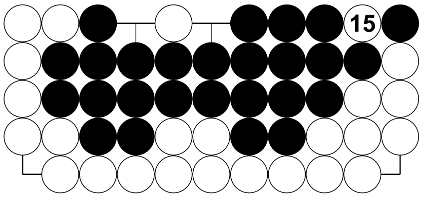


6 pass, 8 pass.

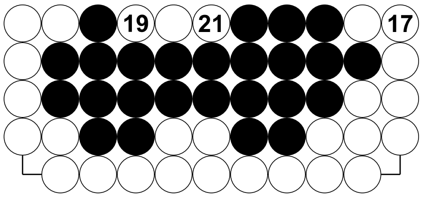




14 pass.



16 pass.

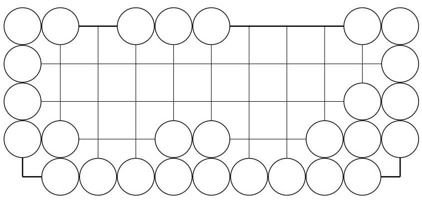


18 pass, 20 pass, 22 pass, 23 pass.

stones paid for passes: 7 black, 0 white
stones removed: 27 black, 5 white

There is an unequal number of moves in this playout. So the last pass is free.

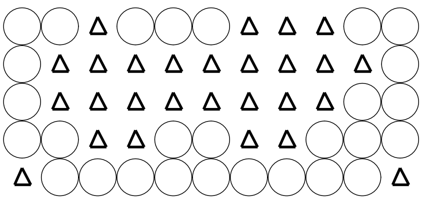
Position at the End of the Playout



prisoner stones: 34 black, 5 white

Scoring

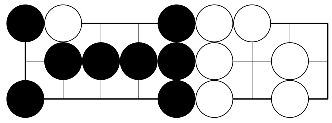
There are 34 black and 5 white prisoner stones.



(0 + 5) - (27 + 34) = -56

Black's score consists of 0 points of territory and 5 white prisoner stones. White's score consists of 27 points of territory and 34 black prisoner stones.

Example 7



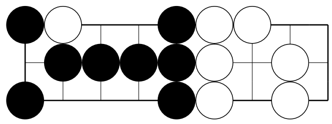
General Information

- diagram index: 0035
- traditional description: "dead ko"
- board size: 9x3
- board parity: odd
- black - white stones: 1
- to move: White
- frequency: 1:1 to 1:10
- total reading time: 2m
- perfect play score: 2
- pass-fight: none

Variation 1

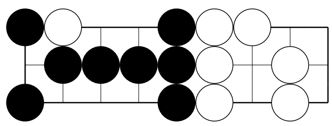
This is a possible perfect play.

Alternation



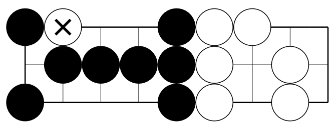
1 pass, 2 pass.

Position at the End of the Alternation

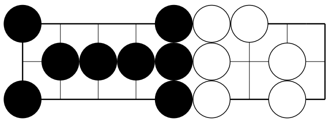


Agreement

The players agree to remove the marked string.



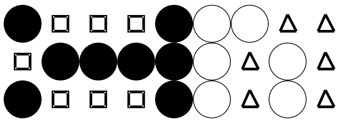
Position at the End of the Agreement



prisoner stones: 0 black, 1 white

Scoring

There are 0 black and 1 white prisoner stones.



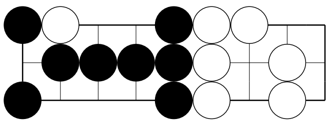
(7 + 1) - (6 + 0) = 2

Black's score consists of 7 points of territory and 1 white prisoner stone. White's score consists of 6 points of territory and 0 black prisoner stones.

Variation 2

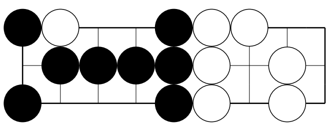
This is a possible perfect play.

Alternation



1 pass, 2 pass.

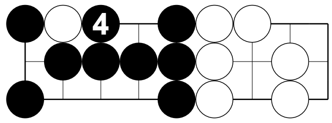
Position at the End of the Alternation



Agreement

The players disagree in the agreement phase.

Playout

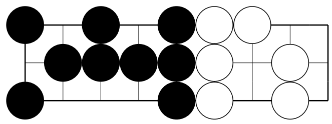


3 pass, 5 pass, 6 pass.

stones paid for passes: 1 black, 2 white
stones removed: 0 black, 1 white

There is an equal number of moves in this playout. So also the last pass is costly.

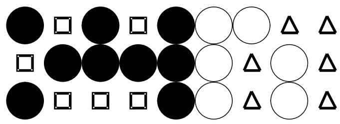
Position at the End of the Playout



prisoner stones: 1 black, 3 white

Scoring

There are 1 black and 3 white prisoner stones.



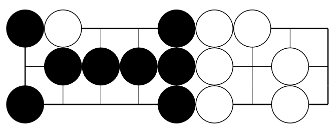
(6 + 3) - (6 + 1) = 2

Black's score consists of 6 points of territory and 3 white prisoner stones. White's score consists of 6 points of territory and 1 black prisoner stone.

Variation 3

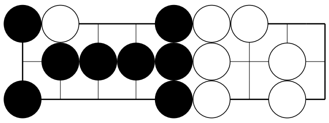
This is a possible perfect play.

Alternation



1 pass, 2 pass.

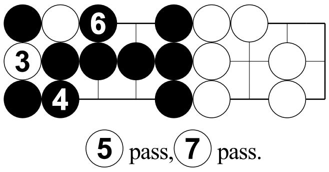
Position at the End of the Alternation

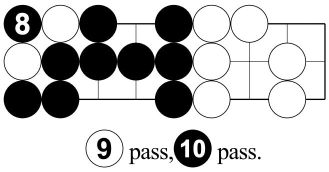


Agreement

The players disagree in the agreement phase.

Playout

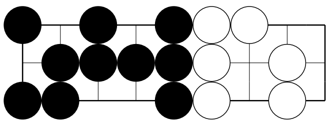




stones paid for passes: 1 black, 3 white
stones removed: 1 black, 2 white

There is an equal number of moves in this playout. So also the last pass is costly.

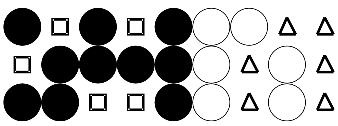
Position at the End of the Playout



prisoner stones: 2 black, 5 white

Scoring

There are 2 black and 5 white prisoner stones.



(5 + 5) - (6 + 2) = 2

Black's score consists of 5 points of territory and 5 white prisoner stones. White's score consists of 6 points of territory and 2 black prisoner stones.

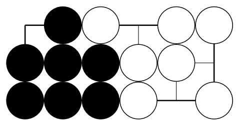
Irregular Dead Kos

An "irregular dead ko" is a ko that is not a regular dead ko but that would be a regular dead ko if, in traditional terms, a pass in a succession of passes might, if legal, serve as a ko threat.

Notes for the theoretically interested reader: On the 19x19 board, irregular dead kos never occur in practice. On the 9x9 board, so far there has been only one report about a game with an irregular dead ko. The tinier the board the more likely irregular dead kos become because fewer and fewer tenukis are available.

Because of the rarity, only one example is shown. Other examples with irregular dead kos can be significantly different. Each type of position with some irregular dead ko might require a different theoretical background related to pass-fights. However, since irregular dead kos are so rare, here it is not studied in general whether due to some of them pass-fights could occur. A rare occurrence of pass-fights may as well simply be tolerated.

<u>Example 1</u>



General Information

- diagram index: 0036
- traditional description: "dead ko"
- board size: 6x3
- board parity: even
- black - white stones: 0
- to move: Black
- frequency: 1:10,000,000 to never
- total reading time: <1m
- perfect play score: 1
- pass-fight: none

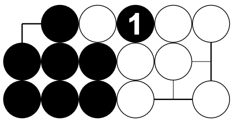
Remark

The behaviour of this position, where no tenuki is reasonably available, is a special strategic consequence of superko.

Variation 1

This is a possible perfect play.

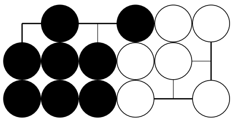
Alternation



2 pass, 3 pass.

Position at the End of the Alternation

There are 0 black and 1 white prisoner stones.

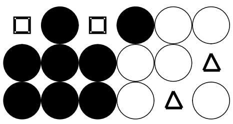


Agreement

The players agree not to remove any strings.

Scoring

There are 0 black and 1 white prisoner stones.



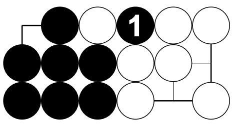
(2 + 1) - (2 + 0) = 1

Black's score consists of 2 points of territory and 1 white prisoner stone. White's score consists of 2 points of territory and 0 black prisoner stones.

Variation 2

This is a possible perfect play.

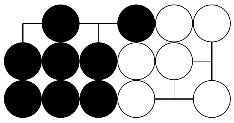
Alternation



2 pass, 3 pass.

Position at the End of the Alternation

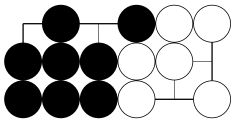
There are 0 black and 1 white prisoner stones.



Agreement

The players disagree in the agreement phase.

Playout

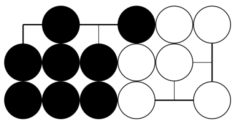


4 pass, 5 pass.

stones paid for passes: 1 black, 1 white
earlier prisoner stones: 0 black, 1 white
new stones removed: 0 black, 0 white

There is an equal number of moves in this playout. So also the last pass is costly.

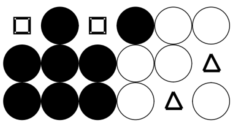
Position at the End of the Playout



prisoner stones: 1 black, 2 white

Scoring

There are 1 black and 2 white prisoner stones.



(2 + 2) - (2 + 1) = 1

Black's score consists of 2 points of territory and 2 white prisoner stones. White's score consists of 2 points of territory and 1 black prisoner stone.

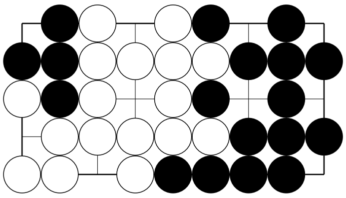
Remarks about Pass-Fights

Since neither player wants to fill a liberty of his own, passes are forced after the ko capture. Therefore there is no pass-fight.

Regular Dead Kos and Basic Endgame Kos

Basic endgame kos shall be discussed in later sections. Here only their possible coexistence with regular dead kos is pointed out.

Example 1



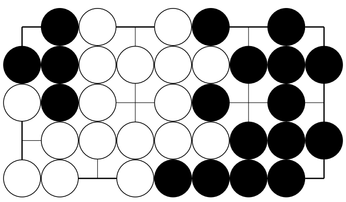
General Information

- diagram index: 0037
- traditional description: "dead ko and two basic endgame kos"
- board size: 9x5
- board parity: odd
- black - white stones: 1
- to move: White
- frequency: 1:1 to 1:100
- total reading time: 3m
- perfect play score: -12
- pass-fight: none

Variation 1

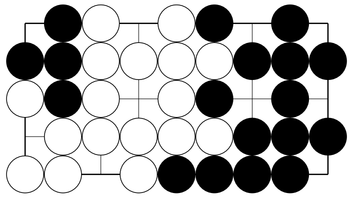
This is a possible perfect play.

Alternation



1 pass, 2 pass.

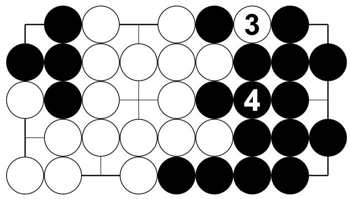
Position at the End of the Alternation

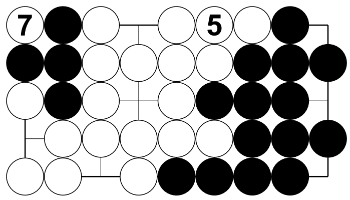


Agreement

The players disagree in the agreement phase.

Playout



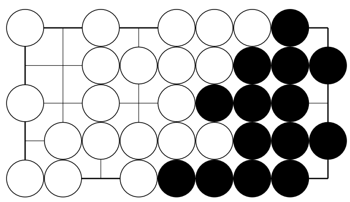


6 pass, 8 pass, 9 pass.

stones paid for passes: 2 black, 0 white
stones removed: 5 black, 0 white

There is an unequal number of moves in this playout. So the last pass is free.

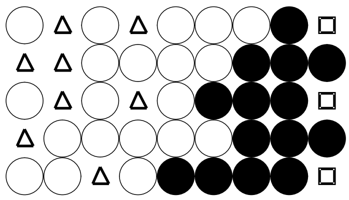
Position at the End of the Playout



prisoner stones: 7 black, 0 white

Scoring

There are 7 black and 0 white prisoner stones.



(3 + 0) - (8 + 7) = -12

Black's score consists of 3 points of territory and 0 white prisoner stones. White's score consists of 8 points of territory and 7 black prisoner stones.

Remarks about Pass-Fights

During the alternation, each play, whether filling territory, in the dead ko, connecting or capturing a basic endgame ko, done with the intention to have a pass-fight, costs 1 point. This is too much because the value of the playout's last pass is at most 1 point. So there is no pass-fight during the alternation.

During the playout, the regular dead ko may be considered a part of White's area in a regular divided subboard position. The only interesting intersections are those of the basic endgame kos. It cannot be avoided that each player controls one of them. Without loss of generality, suppose that Black will control the lower one while White will control the upper one. Then one can consider also the four intersections of the basic endgame kos as a subboard with a regular division. Anticipating a proposition to be proven, a combination of regularly divided subboards (that are fixed as subboards and have alternating play on them altogether) does not provide pass-fights, either.

Summarizing, although a formal, general proof would be more reliable, one can already observe that there are no meaningful pass-fights in the position.