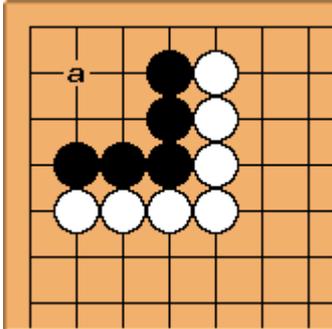


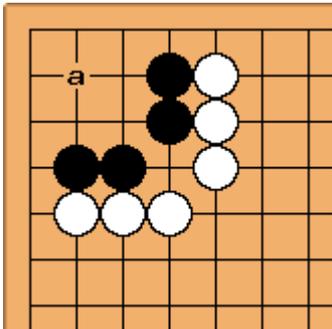
## Basic Corner Shapes

### Carpenter's Square



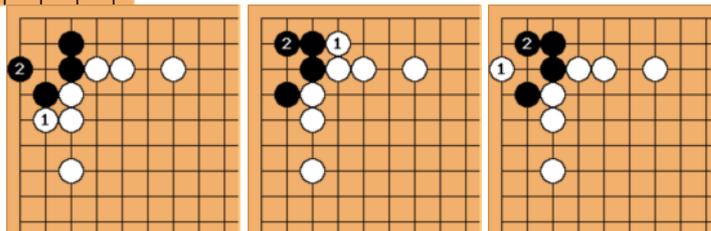
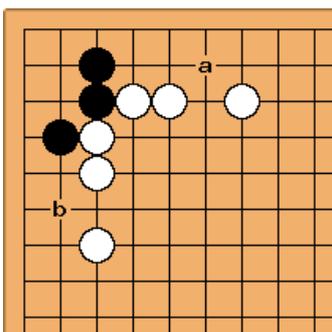
With one or no outside liberties: The black formation in this diagram is the carpenter's square. The vital point is a: Black can play there to live. White can play there to turn the corner into ko.

### Weak Carpenter's Square



The weak carpenter's square is a carpenter's square without the connection at the corner of the shape. The vital point is the same, but this time White kills the corner by playing at a.

### Tripod

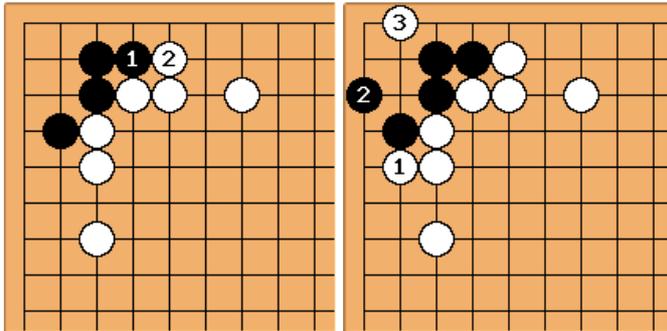


Defend like this:

The black group in this diagram is called the tripod group. It is one of the smallest shapes in the corner that is alive as it stands.

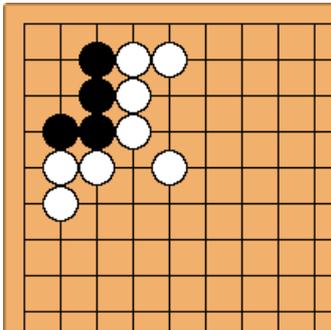
Surrounding stones do matter for the status of the tripod group. For example, if there is a White stone at a or b, then the status becomes unsettled.

### Tripod with extra leg



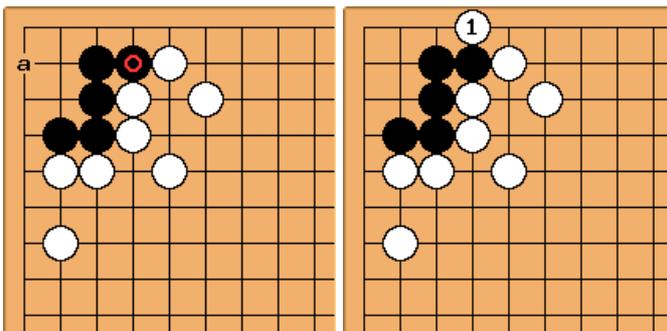
While the tripod group is unconditionally alive, Black should not make the exchange of ① and ②. The reason is that after the exchange, ① and ③ turns the whole group into a ko.

### L-Group



The black shape in this corner is called the L-group. This shape is dead even if Black plays first. The proverb says: "The L-group is dead".

### First L+1-Group (leg at the short side)

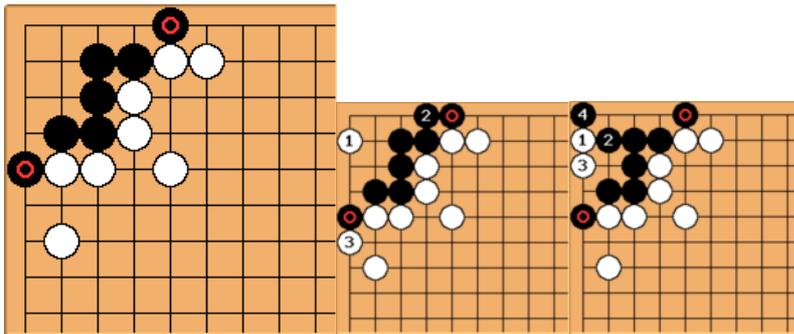


The First L+1 group lives or dies according to who has sente.

- > Black can live by playing at A.
- > White can kill by playing Hane at 1.

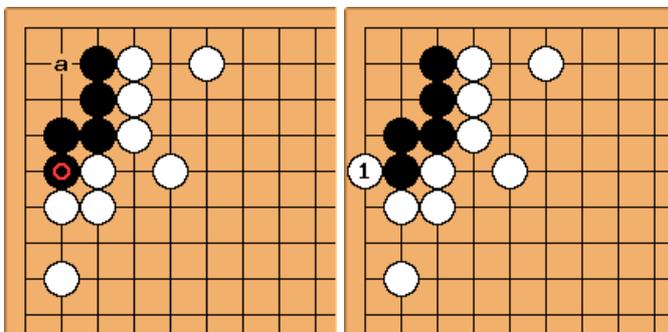
The First L+1 group with Hane on one side can also be killed.

### First L+1-Group with Hane on both sides



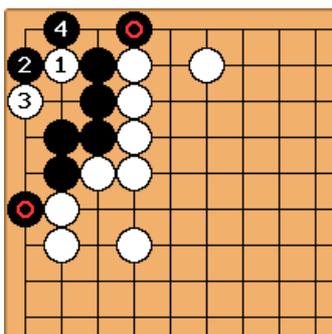
The first L+1 group with hane on both sides is alive if it has an external liberty. However, when the group has no external liberties, White can turn it into a ten-thousand year ko (left diagram) or multiple step ko (right diagram) depending on Black's answer.

### Second L+1 Group (leg at the long side)



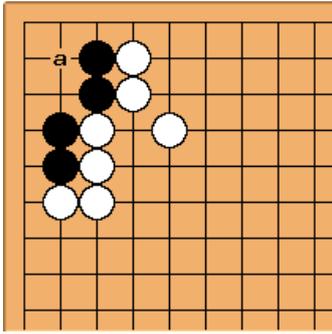
If the leg is on the other side, again the position depends on who has sente.  
 > Black can live by playing A.  
 > White can kill by reducing to a standard L-group by playing hane again.  
 The second L+1-Group with hane on one side can also be killed.

### Second L+1 Group with hane on both sides



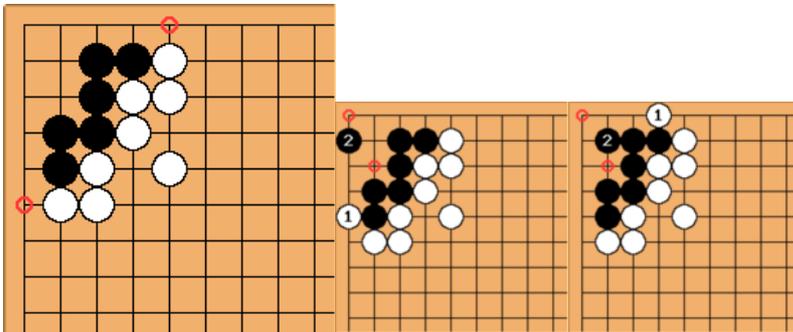
White 1 leads to a ko.

## Second L+1 Group, weak leg

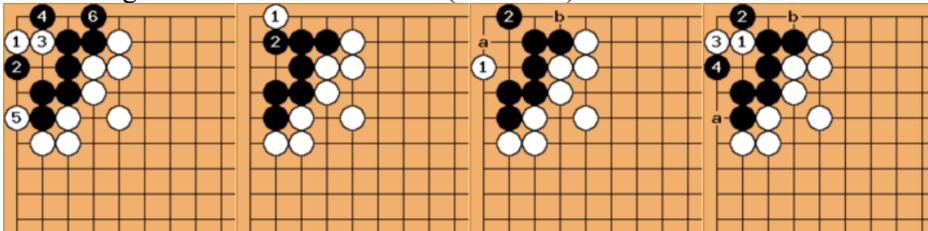


The second L+1 group with a weak leg is also unsettled. White can kill at a or Black can live by playing at a.

## L+2 Group (leg on both sides)



Defence against Attacks from within (a&b miai):



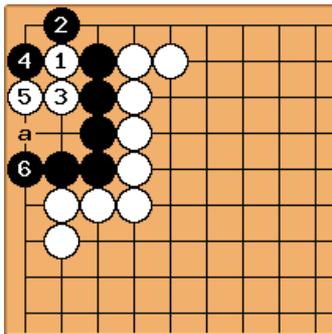
The L+2 group is alive. The corner territory can be reasonably counted as 6 points.

A White descend at the long side does not change the status, a White descend at the short side enables White do get a ko or seki due to damezumari.

Against the hane from the long side, one should defend at the 1-2 point. Now there are two sure eyes at the circled points.

Against the hane from the short side, one should defend at the 2-2 point. Now there are two sure eyes at the circled points.

## The Long L-Group (one arm)



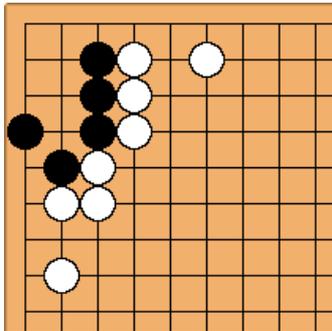
When Black has no outside liberties White can get a 10.000 years ko.

The long L-Group with Hane on one side can also result in a 10.000 years ko (sequence different if hane on 'upper' side).

If White has a descend at one side she can kill Black.

The long L-Group with an outside liberty is unconditionally alive.

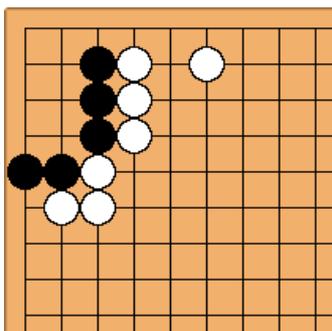
## J-Group



Lives or dies according to who has sente.

However, if Black has a hane on the 'upper' side he is unconditionally alive.

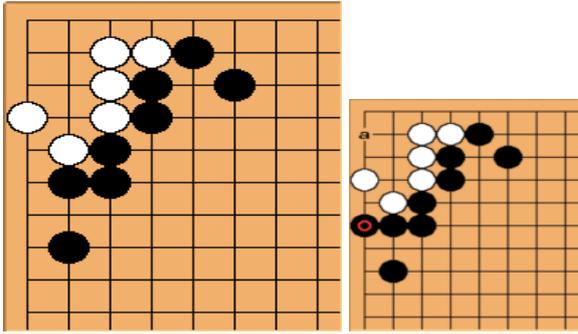
## Straight J-Group



Black can improve on the status of his corner by descending to the edge instead of making a hanging connection. The best White can do now is turn the corner to ko (though White also has the option to unconditionally snip off the two lower black stones leaving the main Black group alive, which might be better in rare cases).

Straight J-Group with Hane and no additional outside liberty is still ko/with Hane and additional outside liberty is alive.

## J+1 Group



The J+1 group on its own is unconditionally alive.

When Black descends at , it changes things.  is sente, so White needs a move at a. (The other descent is not sente.)