

# Japanese Mahjong Strategy

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# Preface

Originally, this file was created in an attempt to learn building pdf files with  $\text{\LaTeX}$ . I am an avid player of the Japanese "Riichi"-Mahjong, myself, and I just so happened to stumble across JAJMB<sup>1</sup>. "Hongyi" there translated some Articles. Articles I soon came to like.

As I was reluctant (to say the least) to just write some garbage for the sake of learning  $\text{\LaTeX}$  commands, I decided I would take this chance and make an offline-readable pdf file consisting of these articles instead.

These articles originally were in Chinese. (Chinese people playing Japanese mahjong? Go figure.) They therefore contain a lot of mahjong lingo I expect you're not necessarily familiar with.

I tried to add a glossary containing the words I thought you might have trouble understanding and linked them where I deemed it necessary. I will not write down everything, though, as I expect you to already have played some games and therefore have a rough idea how Japanese mahjong works. (Should you require more information, please consult the web.)

## Two quick notes

1. Since the images in the original articles are watermarked and I do not like watermarks in my documents, I will be using my own images. The great tile-graphics they feature were kindly provided by Martin Persson<sup>2</sup>.
2. The number tiles are called "manzu" in Japanese, the circles "pinzu" and the bamboos "souzu" where "zu" can be interpreted as "suit" e.g. 1 sou, 5 pin, ..., 7 *wan* (The individual manzu are pronounced with a w, not an m).  
East (東) is called "ton", South (南) is called "nan", West (西) is called "shaa" and North (北) "pei".  
Red Dragon (中) is "chun", Green Dragon (發) "hatsu" and White Dragon (empty tile or 白) "haku".

Now, let's have these articles.

よろしくお願ひします<sup>3</sup>

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<sup>1</sup>Just Another Japanese Mahjong Blog : <http://justanotherjapanesemahjongblog.blogspot.com>

<sup>2</sup>Martin Persson: <http://www.martinpersson.org/>

<sup>3</sup>よろしくお願ひします reads "yoroshiku onegaishimasu". Literally translating to something along "please be kind to me", it can - for example - be used as greeting or when asking for a favour. It is also not unusual to say it when starting a game or a match.

# 1 Tile Efficiency

## 1.1 Why do you want to discard efficiently?

Compared to Cantonese or Taiwanese mahjong, Japanese mahjong requires a higher requirement of tile efficiency. So once everyone has learned the rules, they'll have to spend some time learning tile efficiency, in order to improve their results. As I explain why tile efficiency is so important in Japanese mahjong, I'll also explain the special characteristics of Japanese mahjong's system.

### Japanese mahjong compares position, not points

Beginners in Japanese mahjong have to remember this, Japanese mahjong compares position, not points. Japanese mahjong uses a **tonpuusen** or a **hanchan** as a calculation unit. Your results will be equivalent to every unit's average position. In a **tonpuusen**, just because you win a hand doesn't mean you'll be first, but *if you can't even win a single hand, you definitely won't win*. Cantonese mahjong allows you to make a big hand every time, because a single big win is equivalent to 10 small wins. However, this playing style won't work in Japanese mahjong. If you can't win a single hand, you'll lose badly.

### The importance of closed hands

If you look closely at the **yakus** of Japanese mahjong, you'll realize the importance of closed hands in Japanese mahjong. You can declare riichi as long as your hand is closed, not only does it fulfill the requirement of having at least one yaku but also allows you to flip open the **ura-dora**. Japanese mahjong also has a lot of yakus that require closed hands, or having reduced value if your hand is open.

If you want a closed hand, then *you'll need to rely on the tiles that you draw*. Because the tiles that you can rely on are lesser, *good tile efficiency is about increasing the probability of improving your hand*. The importance of tile efficiency is much higher than in Taiwanese mahjong, for example.

### Japanese mahjong's scoring system

Japanese mahjong's scoring system is also unique. For a 1-4 **han** hand, every extra han is equivalent to double the score, but 5 han and above is another story. For example, a 5 han hand is mangan. Add an extra han and it'll be haneman, but the score will only increase by 50%. Adding an extra han to a 6 han hand is useless, as 7 han is also a haneman.

A 8 han hand's scoring in Cantonese mahjong is 8 times of a 5 han hand, while it's only 2 times in Japanese mahjong. Hence *in Japanese mahjong, few will go for a big hand, since*

*the efficiency is too low.* In a game with 3 aka dora, everyone has an average of close to 2 doras. This becomes clearer when you are getting 3-4 han just by winning.

Because there's a lot of dora, winning with a 3-4 han hand is not hard, thus winning with a closed hand is more advantageous than waiting for a big hand. If you want to increase your winning rate, a good efficiency is required.

Now that the useless stuff is over, the next article will get to the main point.

PS: Tile efficiency is a huge learning ground, there are many more things to explain than that are currently included in this document. But in order for the readers to learn other more important theories, I will first set aside these additional topics regarding tile efficiency. Once other parts have been discussed, I will write more articles on tile efficiency.

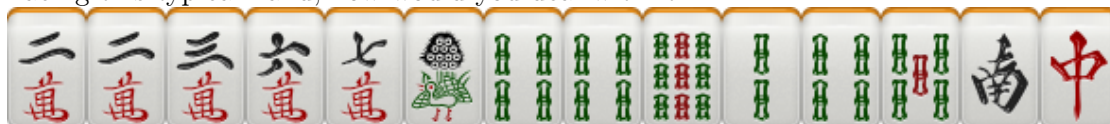
## 1.2 Beginner Tile Efficiency - Tile Distribution

Tile efficiency is a skill that allows you to win in the fastest time. In Japanese mahjong, winning as fast as possible means quickly making [4 **mentsu** + 1 **jantou** + 1 **yaku**]. Therefore tile efficiency is about thinking in this direction, discarding the tile that gives you the smallest probability in making a mentsu, and increasing the probability of making a mentsu as much as possible.

In fact, tile efficiency is already useful at the start of the game.

## Priorities in tile discarding

Facing this typical hand, how would you deal with it?



The tile efficiency here is simple, just discard the most useless tile. What do you mean by most useless tile?? Isolated guest wind tiles are the most useless, because you can't make **shuntsu** with them, you can only wait to make a pair with them, which has a low probability. What you need to note is, a single tile of your seat wind or round wind is a different story. As long as you can pon with it, you can clear the 1 yaku requirement. You can also **chi** others' tiles afterwards. Therefore its value far surpasses the value of guest wind tiles.

After guest wind tiles, it's isolated 1 or 9 tiles. If you're using them, they will most likely turn into **kanchan** or **penchan**. However with the hand above, the value of 1 pin is lower than 9 pin, the reason is because of the 4 pin. Even if you discard 1 pin and draw 2 or 3 pin, they can form a **mentsu** with 4 pin without wastage. On the other hand, if you discard 9 pin and draw 7 and 8 pin, you'll have wasted a tile. In this example, the value of 1 pin is on the same level as isolated guest wind tiles due to 4 pin.

In simple terms, the order of tile discarding is as below:

1. Isolated guest wind tiles, isolated 1 or 9 when there is 4 or 6
2. Isolated 1 or 9 tiles
3. Isolated yakuhai
4. Isolated 2 or 8 tiles
5. Isolated 3-7 tiles, penchan tiles

Note: The order of 3-5 may differ for different hands.

More examples:



1 pin is the most useless here, discard it first. With this kind of bad shape, discarding chun is a bad move.



Discarding sha is the correct move. Despite the presence of 4 wan, 1 wan here will be viewed as an isolated 1 or 9 tiles as 456 is already a mentsu.

### 1.3 Begginer Tile Efficiency - Taatsu

After a few rounds of discards, you'd normally be able to get rid of any useless honour tiles. If the remaining tiles do not form mentsu, you can roughly separate them into three types.

1. Taatsu
2. Isolated tiles (Number tiles that are alone)
3. Toitsu

The next few paragraphs will first explain the taatsu problem.

## Types of Taatsu

**Taatsu** can be separated into **ryanmen**, **kanchan** and **penchan**. The value of penchan is the lowest, followed by kanchan, while ryanmen holds the highest value. Therefore when you have too many taatsu and need to break up one, start with the one with the lowest value.



You should discard 12 wan here. If you need to choose between discarding taatsu of the same type, you can consider which one of the two will be able to evolve into a better shape.



In this kind of situation, there are two ways of breaking down the taatsu: 24 wan and 35 pin. On the surface, 24 and 35 are the same, but there are differences. You can form ryanmen with 35 pin by drawing 2 or 6 pin. However with 24 wan, drawing 1 wan will turn it into a penchan. Therefore the probability with 24 wan is lower than 35 pin. To preserve the possibility of drawing 5 wan, discard 2 wan first.

Therefore beginners should memorize this order of values:

*Penchan* < 13*Kanchan* < 24*Kanchan* < 35*Kanchan* << *Other middle Kanchan* <<< *Ryanmen*

## 1.4 Important complex taatsu (1)

The taatsu mentioned in the previous article, are isolated and easy to spot taatsu. This time, we'll go through some common complex taatsu.

1. 4556

The most common mistake made by beginners, is to see this as [456 shuntsu + isolated 5], and discard 5 too early. In truth, this shape should be seen as two ryanmen  $45 + 56$ , allowing 3467 to be added into the hand. It also allows a good chance of getting ippeiko. *In Japanese mahjong, it's a shape that is highly valuable.* If there's a shape this like this in my hand, I won't easily dismantle it.

2. 4567

The logic is the same here, this shape should be viewed as two ryanmen  $45 + 67$ . This shape can evolve into many shapes. You can draw 56 to form a mentsu + ryanmen, draw 38 for a three sided wait, draw 47 to form a jantou + mentsu. It's value is not lower than the previous 4556.

3. 4456

This is a toitsu + 56 ryanmen shape, there are quite a number of effective tiles. However, since there's a large probability of not forming a good ryanmen, it's not as valuable as the previous two shapes, but it's still a good shape.

4. 3567

This is a shape that even intermediate players would sometimes forget. We can view it as  $35 + 67$ . There are 6 useful tiles of this shape: 1, 2, 3, 4, 5, 8. Among them, 1, 5, 8 will create a kanchan. It's value is lower than 4456.

5. 4445

This shape is no stranger to those who play mahjong, this is a common 3 sided wait shape. But if the hand is not in *tenpai*, the value of this shape is normal. This shape is incapable of giving you two mentsu, at the most it'll give a jantou + mentsu. The important thing to remember, is that you need 4 mentsu in order to win, while you only need 1 jantou. Therefore, your need of mentsu is much higher than that of jantou. In fact, when you have many toitsu in your hand, this 5 here will often become a useless tile.

## 1.5 Effective tiles overlap

Look at the example below.



Which tile should you discard?

45 pin is ryanmen, therefore you should choose between 12 wan and 12 pin. On the surface both are penchan, discarding either group shouldn't matter. Let's first count the number of effective tiles.

- a) discard 12 wan: draw 36 pin to tenpai
- b) discard 12 pin: draw 3 wan and 36pin to tenpai

Therefore, discarding 12 pin is the correct answer here. This has 50% more effective tiles. Both are penchan, but discarding 12 pin is better, the reason is because 1245 pin is a bad shape with effective tiles overlapping.

As 12, 45 taatsu both require 3 pin, once you discard 12 pin, the number of effective tiles will not decrease. In fact, overlapping of effective tiles is an important efficiency theory in Japanese mahjong, you should pay attention to this during actual play.

Example:



Beginners often hope to draw 5 wan for a 3 sided wait and discard 23 sou, this is incorrect. In fact, because 3467 wan has effective tiles overlapping, you should discard manzu instead.

## 1.6 Important complex taatsu (2)

Two chapters before introduced quite a number of good shapes in Japanese mahjong that are important but often overlooked, this time I'll introduce some other commonly seen taatsu.

### 6. Double/Triple middle taatsu

"Double/Triple middle taatsu" refers to 468, or 2468 etc continuous kanchan type of shape. Quite a few beginners think of kanchan as a bad shape, and do not like this type of shape. But we have to be aware: a 246 double middle taatsu has the same number of effective tiles as a ryanmen. The difference is that the former require 3 tiles, while the latter only require 2 tiles, the former has a lower efficiency. It may not be a good shape, but when the number of taatsu in your beginning hand is not enough, the double middle taatsu is still useful.

### 7. 3556 shape

On the surface, the two taatsu of  $35 + 56$  seems to be similar to the aforementioned  $35 + 67$ , in fact there's a huge difference between them. The reason is that *35, 56 violates the problem of effective tiles overlapping*. In this situation, 35 taatsu has a low value, if there's enough taatsu, 35 should be the first to be discarded. Having 56, or 556 remaining should be enough.

### 8. 5566

Everyone might think of 5566 as two ryanmen, and there's a chance of becoming iipeikou. But to me, it's a bad shape. 5566 definitely has effective tiles overlapping. It might seem easy to draw 47 twice, but when there are other good taatsu, this should be quickly disposed of.

Discussion regarding taatsu stops here. If there are any questions, feel free to ask them. The next chapter will be discussing some examples of problems.

## 1.7 Choosing between multiple shanten shapes

### Revision

There are already quite a number of articles related to taatsu theory. If you're purely going for the fastest way to reach tenpai, you should start discarding in order, beginning with the taatsu with the lowest possibility of effective tiles.

If you find yourself with similar taatsu, you can consider with the following:

- future evolution of the taatsu (penchan good evolution etc)
- is it a bad shape, for example having effective tiles overlapping
- how easy it is to win when in tenpai
- yaku etc

Among them, a and b are the most important.

Example 1:



This is choosing between discarding 89 pin or 12 sou. The readers who have read the article about overlapping effective tiles, should be able to easily find the answer: As 89's effective tiles overlap with 68, discarding 9 pin is the correct answer.

This problem can be attempted with the "loss of effective tiles" method, the correct answer would be the discard with the lowest loss of effective tiles.

When discarding 12 sou, the loss of effective tiles include 3 sou along with 1,2 sou, whereas when discarding 9 pin, the loss will only be 9 pin, therefore discarding 9 pin is better than 12 sou.

Example 2:



This is a rather famous beginner tile efficiency problem(smile):

Choosing between 23 wan, 78 wan, 34 pin.

The correct answer is discarding 8 wan. After you discard 8 wan, you're left with the shape 233457, 6 wan is still an effective tile! If you discard the remaining two taatsu, you'll lose two types of effective tiles.

Like the 233457 shape, it's very common in Japanese mahjong, beginners should pay more attention.

Example 3:



This question is harder.

68 wan and 24 pin are both kanchan in the same position, both seem to be similar. But if you consider the evolution: when 68 wan draw 5 wan, 2356 wan becomes the aforementioned overlap of effective tiles shape. Therefore the value of 68 wan is lower, you should discard it first.

## 1.8 Toitsu theory (1)

Let's revise the requirements needed to win in Japanese mahjong:

**4 mentsu + 1 jantou + 1 yaku**

You need 4 mentsu, while you only need 1 **toitsu**, and the formation of toitsu is easy. Often we do not need a lot of toitsu, unless we're aiming for a **chitoitsu**.

The extra toitsu, may become a mentsu, a toitsu only need to draw a third tile to become **koutsu**. However the chance of successfully turning into a mentsu is not high, as there are only 2 effective tiles, this is lesser than the 4 effective tiles of penchan. (Reader note: you might think of calling **pon** on discards and gambling on a **toitoi**. However since we're discussing about tile efficiency, the reader should put aside this discussion. The theory related will be explained during the yaku theory in the future.)

Hence, once the number of toitsu exceed what you need, the extra toitsu will become very inefficient. A common mistake between beginners, is keeping too many toitsu, thus slowing down their hand and being unaware of it.

The text below explains the basic principle of handling toitsu.

### You should not determine the jantou too early

The need for **jantou** is low and it is easy to form. When the shanten number is high, and there is only a single pair in the hand, determining the jantou too early will put you at a disadvantage.



There are many people who would determine the 4 pin as the jantou too early and discard the 6 pin. However I am unable to accept this kind of thinking. The correct way of thinking is treating 2446 as two **kanchan**. Discarding 1 pin here is the correct answer.

The 23 wan here along with 34567 has the highest chance of becoming 3 shuntsu, but where would the fourth mentsu come from? If you discard 6 pin, the wait for the fourth mentsu would be 79 wan and 12 pin, but they are bad shapes, and have a low chance of good evolution. Succeeding is not going to be easy.

Discarding 1 pin, and keeping the chance of forming a mentsu with 5 pin is very important, even if on the side of manzu, 79 wan turns into 78 wan:



If it's still at the early stages, discarding 1 pin here remains a very strong discard. Even though 2378 wan is a good shape, this sort of tiles do not guarantee a 100% chance of being added into the hand. In truth, drawing a kanchan tile is a common sight, an extra mentsu as backup is never disadvantageous.

Someone might ask, is it disadvantageous to draw 3 pin after discarding 1 pin?



It's a little disadvantageous, but it's not severe. The loss here is only a jantou. Drawing 2378 wan, 14 pin, 3467 wan will replace the lost jantou. The situation is better than discarding 6 pin and drawing 5 pin.

## 1.9 Toitsu theory (2)

As mentioned before, unless you're aiming for a **chitoitsu**, you shouldn't have too many **toitsu** in your hand. Normally, the limit would be 2 toitsu, any more will result in a bad shape. If you find that there are too many toitsu in your hand, there are a few options.

- Dismantle and discard
- Combine the toitsu with the other tiles in your hand to form a good shape
- Make a chitoitsu

Beginners are often reluctant to discard redundant toitsu, for example (sha as guest wind):



Discarding the isolated pin of 7 pin, 3 sou or 7 sou are common beginner discards. If it were me, I would bravely discard 1 pin or 3 pin.

Actually when it comes to effective tile loss, the loss of discarding 3 pin will only be the other two 3 pin. However if you discard 3 sou, the loss will be 124 sou, a total of 12 tiles (4 each). In a situation with a lack of mentsu, relying on the toitsu in your hand to complete your hand will often result in failure.

When you have 2-3 toitsu in your hand, and if deciding on a jantou is too early, you can consider discarding a toitsu, leave a useful isolated tile, yakuhai etc, and increase the chances of getting a good shape or forming of mentsu as much as possible...

This is not only a method of playing that beginners neglect, even for an intermediate mahjong player, this is a blind spot that is often missed.

For those hands with 4 toitsu and above, normally you can view chitoitsu as a possible choice.

For example, let 3 pin be dora:



This is the game record of MFC, at that time I was the north player. At the fourth draw, I drew 9 sou. What should I do? If you consider a mentsu hand's (4 mentsu + 1 jantou) tile efficiency, discarding 9 sou here is normal. On the surface you can easily make mentsu hand with so many toitsu, but it's the opposite. Currently there is only one confirmed mentsu of 789. The rest of the tiles: 4 wan, 9 wan, 3 pin and sha require drawing two more tiles to win. Every type of tile only has two more tiles, the efficiency is really low. The most important thing is, for the toitsu here to have a good evolution, it's not an easy feat.

Therefore this hand should aim for a chitoitsu. I discarded 2 sou in the actual game.

## 2 Riichi Theory

### 2.1 What is Riichi? - Advantages

Riichi is one of the four types of yaku in Japanese mahjong and holds an important position.

To understand how to judge riichi, first you need to understand what is riichi. Beginners tend to misunderstand riichi. *The most common problem with them is underrating the advantage of riichi.* Therefore it's important to understand the benefits of riichi.

#### 1) Increase your hand value

Many people underestimate the attacking power from riichi. People used to say: "Pinfu-nomi's 1 han is only worth 1000 points, while there's only 2000 points after riichi. There's only 2000 points, so you should damaten."

For now, we won't discuss whether pinfu-nomi should declare riichi, but whether or not riichi can increase your original hand's value by 1 time, and pinfu-nomi is not just 1300 points. I believe everyone has seen these kind of tiles:

Riichi Ippatsu Tsumo Ura-dora 1

Riichi Ura-dora 3

Riichi Ippatsu Tsumo Pinfu Ura-dora 1/2

With riichi, it's not rare to see examples of worthless hands turning into mangan or haneman. Riichi on average will have 1/3 ura-dora, and winning hands with riichi have ippatsu 20% of the time.

If you add these up, in fact riichi has a value of 1.5-1.6 han. According to statistics, winning hands with pinfu-nomi riichi has 3000 points and above on average. Riichi has the ability to increase the value of pinfu-nomi by 3 times or more.

In addition, riichi will increase your tsumo proportion. If your hand is 2600 points, and you win on another player's discard while in damaten, the difference between the player who dealt in and the other two players is 5200 and 2600 points respectively. However if you declare riichi, even if you tsumo and didn't have any ura-dora, the difference between you and the other players is 5000 to 6000 points. That's a huge difference.

#### 2) Restrict your opponent's discards

This is something that is often neglected by most beginners and even some intermediate players.

Once someone declares riichi, unless the others have good tiles, they will not attack

recklessly due to Japanese mahjong's payout system. This way, the opponents have lesser chance of winning. On the other hand, once the opponents have lower chances of winning, *the amount of chances that you can draw tiles increases*, indirectly increasing the value of the winning hand.

This explains why players declare riichi with a **suuankou** tenpai, the main motive is to increase the chances of drawing tiles.

### **3) Makes certain tiles easier to wait on**

This is a tactic that everyone knows.

Luring the opponent to discard the **suji**-pai of the riichi tile(especially 19 suji-pai), guest wind, no chance tiles etc, will achieve the desired result. However I ask everyone not to abuse this tactic, and only use it when it's suitable.

## 2.2 What is Riichi? - Side effects of Riichi

Previously we mentioned the various advantages of riichi. This time will be about the disadvantages and restrictions.

### 1) Decrease in winning rate

Yes, it's a well known fact that the winning rate after declaring riichi is lower than damaten.

The rate of success of riichi over 60% in ordinary games, whereas it's around 45% in phoenix games. While damaten ryanmen waits have a 60-80% chance of winning, as long as not many discards have been made. Riichi's winning rate is around 60% of damaten. However as the value of riichi hands are two to three times of the original value, in addition to having a high chance of tsumo, the expected value of riichi hands is much higher than damaten.

### 2) 1000 points expenditure

In most situations, the 1000 point fee of riichi is no big deal. However if everyone has a small deviation in points, you might want to take it into consideration.

### 3) After declaring riichi, all tiles must be discarded unless it's the winning tile or a tile that you can make **ankan** with

Riichi is a hand exposing declaration. After declaring riichi, you cannot change your tiles in order to change your wait or increase it's value.

Also, even if you draw a dangerous tile, you must discard it. In superior level games, examples of dealing ins are often after declaring riichi.

In summary, the reason why riichi is a main attacking method in Japanese mahjong is because it's advantages far outweigh it's disadvantages.

Naturally, the advantages and disadvantages are affected by different hands and points situations. This is the basis of whether or not to declare riichi.

However, I can first tell everyone two very important points.

- 1. In Japanese mahjong, situations where you need to be in damaten are very rare.*
- 2. You lose more points by not declaring riichi when you should than declaring riichi when you should not.*

## 2.3 Pre-emptive tenpai hand with good shape

For the next three articles, I'll be introducing some commonly seen hands that you should declare riichi with and some hands that you should be in damaten for. Today will be concentrating on hands with tenpai waiting on ryanmen or above.

*The reader must note that the discussion here is assuming that no other player is attacking. (riichi, in tenpai with multiple exposed melds) To decide whether or not to declare riichi while an opponent is attacking, you should use the offence and defence judgement that was previously mentioned as a baseline.*

**All ryanmen tenpai should declare riichi, except for some special situations.** This is the *tesuji* of modern mahjong.

Then what are the "special situations"?

### 1. Hands with value haneman and above

The most commonly seen ones are either *menzen chinitsu* or *honitsu*.



Hands with value haneman and above should be in damaten. The reason is that the 1 han from riichi has little effect here, even not having any value. Your winning rate goes down after declaring riichi, therefore there's no benefit here.

Then what about mangan tenpai?



With a hand with 7700 points, riichi's effects are smaller than a 1 or 2 han hand. If everyone has the same points, you can be in damaten to quickly take the lead. But if it's still early, the chances of winning is huge. Or if someone declares riichi, instantly declaring riichi to gamble for a haneman is also a viable choice.

### 2. All last and not needing the extra points to reach first place

This shouldn't need any explanation. (smile)

### Other situations

Basically, these should be all of the special situations. Then does it mean that all the other ryanmen tenpai should declare riichi? Theoretically, that's correct. In a game between advanced players, a pre-emptive riichi is very powerful.

Beginner advanced players(especially those around *Tenhou*'s higher level tables) do not dare to declare riichi, crippling their firepower. The following shows a few common examples:

## Pinfu dora 1

Beginner advanced players like **sanshoku** too much, and many of them stay in damaten for a hand like this:



There are people who stay in damaten just to wait for 7 sou. This type of hand is definitely a bad hand.

It's true that this hand is at least 7700 points if you draw 7 sou, however the problem is that *the chances of someone discarding 14 pin or drawing them yourself is much higher than drawing 7 sou.* (8 tiles vs. 4 tiles.)

The result is that hands like this often end up with damaten 2000 points or tsumo 700-1300 points. This is a huge waste. A instant riichi might not let you change tiles if you draw 7 sou, but if someone discards 14 pin, then you'll at least get 3900 points. Not only that, there's also a one in three chance of getting ura-dora, thus increasing the points to 7700 points which is equivalent to damaten pinfu sanshoku. Immediately declaring riichi has a chance of getting mangan, which is not lower than drawing 7 sou and then staying in damaten. With the various benefits of riichi, it's more advantageous to just declare riichi.

What about this kind of hand?



A hand that is at least 2000 points and as high as 7700 points. Many people will stay in damaten but you should instantly declare riichi with this kind of hand.

After declaring riichi, even if the **yasume** appears, there's still a good chance of getting ura-dora and turning the hand into a mangan, and even having a chance of becoming haneman if the **takame** appears.

Drawing the yasume while in damaten is the real tragedy here. No matter if the takame is on the inside or the outside, you should immediately declare riichi with this kind of hand.

Applying the same logic, you should not wait for ittsumi with the hand below but declare riichi immediately.



*An instant riichi with pinfu dora 1 is the basic among the basics.*

### Pinfu-nomi/No yaku ryanmen wait

Then what about pinfu **nomi** or a no yaku ryanmen wait?

The mainstream theory in the old days prefer damaten. The reason is that it's unreasonable to spend 1000 points to reach 1300/2000 points. However in today's time, this theory is outdated. *This two types of hand are immediately declared riichi with.*

Using pinfu nomi as an example, riichi pinfu is only 2000 points on the surface. However, if you include **ippatsu** ura-dora etc, the average points of pinfu nomi is above 3000 points. Added to the fact that opponents cannot freely make discards, declaring riichi is advisable.

Also, when we're in ryanmen wait, we'll rarely consider changing tiles.



Even if you can have tanyao by drawing 36 wan, or dora by drawing 7 sou, you should instantly declare riichi with this kind of hand. Half of the time after tenpai, winning happens within 5 rounds of discards. Even if you have 12 effective tile, you'll still need 7-8 rounds of discards to draw it. Therefore in many instances, you'll find that before you draw your effective tile, you would already be able to win. This directly affects your scoring ability.

### Pinfu dora 2

I've seen people who advocate damaten with pinfu dora 2 in some forum.

An instant riichi with pinfu dora 2 is better. It's at least 7700 points with riichi, there's also a better chance of tsumo haneman. There's a huge difference compared to winning 3900 points with damaten.

The only acceptable example is the dealer nearing **ryuukyoku** with a 5800 points tenpai. When the number of round of discards left is not much, maximizing your chances of winning to achieve renchan is a logical method, even though the points is not much. However, immediately declaring riichi is not a bad choice either.

### Is the current round of discard related?

The aforementioned riichi standard should not be affected by the current round of discard. You should just declare riichi with pinfu dora 1, regardless of whether it's the 1st round or the 15th round.

It's true that your chances of winning is low when you're close to **ryuukyoku**. However, do not forget that the success rate of damaten is also limited. Riichi also has the ability to cause other players to go into **betaori**, earning you the **noten bappu**. This is also riichi's intangible advantage.

## 2.4 More on ryanmen tenpai with yasume and takame

A reader raised a question about the previous article, regarding *yasume* and *takame*.

For example, if the hand is:



The yasume of 6 wan is worth 2000 points, while the takame of 9 wan is 7700 points. I mentioned that you should immediately declare riichi with this type of hand, but he feels that damaten is more advantageous. The reasoning is shown in the hand below.



Similarly, it's hand with takame of 7700 points and yasume of 2000 points. It was mentioned before that you can ignore 6 wan with this sort of hand. Then could you follow suit with the previous menchin hand? If you follow suit, would a damaten be more advantageous?

If you only win on the takame with this sort of pinfu hand, it becomes a tenpai with a bad shape. According to statistics, *the difference between the winning rate for damaten with a bad shape and riichi with a good shape is minimal*. The problem is when you declare riichi, would the chances of winning on the yasume of 6 wan be higher than in damaten?

If you only calculate the rate of winning, the rate of winning for 69 wan is close no matter if it's damaten or riichi. However, riichi will increase the chances of tsumo and if tsumo depends on chance, the chances of 69 wan appearing is higher. Hence, riichi will increase the winning rate of 6 wan.

The value of the yasume after riichi is 3900 points without ura-dora. The chances of getting ura-dora is 30%, and the value is 7700 points with one ura-dora. Hence, the expected value is 5000 points. If it's the takame, it's a haneman with one ura-dora and 8000 points without ura-dora. The expected value is over 9000.

If you add the two together, the expected value of over 7000 points is similar to that of the damaten of 7700 points. But don't forget that this result has not factored in the following:

1. Riichi increases the chances of tsumo, increasing the expected value. During damaten, the difference in points after tsumo is only 300 points, but after riichi, but the increase will be larger.
2. The risk of drawing the yasume of 6 wan while in damaten.
3. The advantages that riichi bring: **ippatsu** and the ability to stop other players from reaching tenpai.

In summary, it's more advantageous to declare riichi. With exposed melds, you can choose to ignore the yasume.

You should only be in damaten for this sort of hand if there are very little or no more 6 wan left, or when mangan is enough.

## 2.5 Tenpai with no yaku, having a bad shape

Next, we'll be discussing tenpai with no yaku having a bad shape. (And also hands that shouldn't be in **damaten**.)

The biggest difference between bad shapes and good shapes, is that the former will need to consider the amount of effective tiles that can turn it into a good shape. As there is very little chances of winning, if your hand value is low or the current situation is dangerous, you can choose to go into **betaori**.



Unless the current situation is really dangerous, there's no problem with declaring riichi with this hand.

Beginners like to wait for 4 wan before declaring riichi.

***Everyone has to remember that the tile you want to draw right now is 2 wan, not 4 wan, while the chances of drawing 4 wan is the same as 2 wan.*** If you draw 5 wan first, and then draw 4 wan later, you'll be in **furiten**. You can see that it is not effective to wait for a ryanmen here.

There are also those who would only declare riichi if they draw 5 wan, which is also a loss. If you had declared riichi earlier, it would have the same effect as doing it after drawing 5 wan. It's very important to restrict the discards of your opponent. Not only that, while your hand is damaten, your opponent's 2 wan is able to pass and the number of tiles you can win on decreases by one.

If you **tsumo** 2 wan, 1300-2600 points should be a pretty good return.

Then what about this type of hand?



There are two tiles that you can draw to turn into ryanmen, but you should just declare riichi. After declaring riichi, you can win from any of the other player's discards. Even though the number of tiles that allow you to change into ryanmen has doubled, you need to draw it yourself to use it. By my standards, I will only wait for tiles to change into a better shape only if there are 4-5 types. If the current discard round is already in the middle rounds, this standard will be stricter.

## Number of Dora & Riichi Judgement

Normally, *if your hand has more than 2 dora, you should just declare riichi regardless of the shape.*



There are 4 types and 16 tiles that allows you to change to ryanmen when you have **shanpon**. Not only that, you'll also get pinfu. However when you have dora 2, there's nothing wrong with declaring riichi immediately.

If there are not many tiles that you can use to change to ryanmen when the dora is only 1, just declaring riichi is also a tesuji in modern mahjong. Getting a mangan with tsumo and 1 ura-dora is not a rare occurrence.

As for pinfu-nomi that doesn't have any dora, the return is too low, the risk of riichi is relatively larger. You can choose to remain in damaten in this situation, and going to betaori if a dangerous situation arises.

## Tanki Tenpai

A tanki tenpai that only lacks a **jantou** will be waiting for tiles to turn into a good shape in most situations, the reason is that the number of tiles that you can use is a lot.



If you have 2-3 dora, you can discard 1 wan and declare riichi. If you have no dora, discard 2/4 pin and go for a tanki wait in damaten. There are many tiles that can be used to change your wait... 2356 wan, 69 sou, 5689 pin can be used to change into a good shape. Not only that, tanki wait on a **guest wind** is also a good choice.

## Deciding whether or not to be in tenpai

In some situations where you have a tenpai with bad shape, choosing not to be in tenpai and going for a good shape is another common method. For example:



Discarding 36 wan is tenpai without any yaku. However, discarding 9 pin here is a what an advanced player would do. 3456 wan is a very good shape mentioned earlier with many effective tiles. This hand will be able to turn into a tanyao pinfu. Regardless of winning rate or value, it's far superior to a 1300 points riichi hand.

It's important to be able to decide whether or not to be in tenpai. Beginners should try to understand it properly.

## 2.6 Tenpai with yaku having a bad shape

This section will explain the benchmark of **tenpai** with **yaku**, having a bad shape. There is actually very little difference between this part and other situations with bad shape.

### Instant riichi with a 2600, 5200 point hand(including riichi)



There is no problem with declaring riichi immediately with this hand at all.

However since you can win in **damaten** with this hand, there are cases where people stay in damaten. You can choose to stay in damaten, if you realize that the current situation is dangerous or there's a situation that warrants going into **betaori** for.

### Damaten with a 5200 points hand

The majority of modern mahjong players would stay in damaten with a 5200 points hand that has a bad shape. The only exceptions are when the current round of discard is early or when it's obvious that someone is attacking. (If there's already a situation where three exposed melds are made.)



Riichi only increases the points to 8000, and getting ura-dora would be pointless as the effectiveness is diminished. However if it's still early, there's a good chance of getting tsumo, you can try gunning for a ura-dora 1 haneman.

### Tenpai with a [really bad shape]

A really bad shape refers to waiting on tiles that no one will discard, like a dora in the middle of a suit. For example:



Or an even more extreme example:



In the first example, waiting for a 5 wan to turn it into a 3 sided wait is a negative way to play.

Beginners tend to assume that no one will discard the dora 7 wan. They will continue to wait even if the current situation is impossible to change tiles with. This is an unwise play style. Since you understand that the dora is a tile that will not come out even if you are in damaten, then you should also know that *the side effect of riichi that decreases your winning rate is also hugely reduced*. It'll at least be a mangan if you declare riichi and tsumo the dora, and it'll be haneman if you get ura-dora 1. Why not just declare riichi?

The second example follows the same reasoning. No one would simply discard a dora in the middle of a suit. Personally, I would declare riichi and aim for a tsumo.

True, this type of hand would usually end in *ryuukyoku*. (This type of dora tanki tenpai has a winning rate of 20 to 30 percent) However, a haneman is guaranteed if tsumo is achieved, and a baiman is possible if there is an ura-dora. It doesn't matter if the winning rate is a little low, right?

## 2.7 Tips to riichi

The previous articles introduced a few commonly seen examples of whether or not to declare riichi. Next, we'll discuss what tile you should declare riichi with.

It may seem like a trivial matter, but as the error piles up, it may adversely affect your results.

### Choose the tenpai that lets you win easily

This can be considered a basic tenet of riichi, for example:



I believe that everyone would discard 4 sou and riichi.

Sometimes, a tile isn't necessarily easier to win on just because it's been discarded less. In the above example, even if a nan has been discarded and not a single 4 sou has been discarded, discarding 4 sou is still the correct choice. *A guest wind tile that has been discarded once is a very good wait.*

What about this hand?



It's a no brainer to declare riichi here with dora 3.

However, I'll only give you 90 marks if you declare 9 pin here. Personally, I would discard 2 wan and wait on tanki 1 wan. Even though the number of tiles you can wait on is one lesser, there are two advantages in waiting for 1 wan:

1. 1 wan is more difficult to use compared to 3 wan, and it is much easier for it to be discarded. This effect is much more pronounced when the riichi is an early one and there are no safe tiles.
2. After discarding 2 wan, everyone will discard it as it's a **genbutsu**. 2 wan will gradually become **kabe**, thereby increasing the chances of someone discarding 1 wan.

The winning rate of 1 wan here should be higher than that of 3 wan.

### Prioritize ankou of terminal tiles

Hands that do not have pinfu, should retain ankou of terminal tiles if possible. Like the following:



You should never discard 2 pin, but discard 3 pin here.

Terminal ankous are worth 8 fu, and the fu of the hand will be 40 fu if you get a tsumo. There's a difference between 1000 - 2000 points and 1300 - 2600 points.

### Chance of ura-dora

Ura-dora is an important right of riichi, but a careless discard can affect your chances of getting ura-dora.



In normal situations, you would discard 5 wan and not 2 wan, and declare riichi. The hand is obviously aiming for ura-dora in order to reach mangan, and therefore should increase the chances of getting ura-dora.

However, there are exceptions to this.



The current round is all last and you're the dealer, the difference between you and the top player is 20000 points. Winning with a riichi tsumo mangan and getting a renchan in order to achieve *gyakuten* is a good idea, however, it would be perfect to get a tsumo haneman and achieve *gyakuten* in one shot.

Getting an ura-dora 1 would only mean an increase of 300 points, whereas ura-dora 2 gets you a haneman. Hence in order to increase the chances of getting ura-dora 2, it would be better to discard 8 wan here.

## 2.8 Decision between tenpai with points difference (1)

We're basically at the end of the riichi theories, which is also the hardest part to understand.

Everyone should have had hands that can go into tenpai with different waits, and hands with a good shape that has a lower value than hands with a bad shape, e.g:



This hand has three choices:

1. Good shape (Discard 7 sou) riichi
2. Bad shape (Discard 4 sou) damaten
3. Bad shape (Discard 4 sou) riichi

As mentioned before, you should declare riichi when you have a good shape, therefore there's no need to consider the first option. The point of this article is to find out which is the correct method.

I'll first introduce an important theory.

*The winning rate of riichi with a good shape is similar to that of damaten with a bad shape.*

This theory is based on a huge amount of statistics.

If riichi and damaten have the same amount of points, it is more advantageous to declare riichi. This is due to **ippatsu** and **ura-dora**. Hence:



For this type of hand, discarding 1 wan and declaring riichi is better than discarding 4 wan and staying in damaten.

As for the example in the beginning, riichi with a good shape is 3900 points, while damaten with a bad shape is 5200 points.

Similarly, riichi with a good shape is definitely better than damaten with a bad shape. A 3900 points **ryanmen** riichi has a winning average of 6000 points and above.

Then how does a good shape and a bad shape compare when declaring riichi?

For this kind of points, the good shape is more advantageous. The riichi with the bad shape is 4 han 30 fu, the effectiveness of ura-dora etc will be reduced. However, the winning rate will be a grade lower and the expected value is not comparable to that of the riichi with the good shape.

Hence, unless it's all last where you need tsumo haneman or other special situations, declaring riichi with a good shape is the correct answer.

## 2.9 Decision between tenpai with points difference (2)

### Hands with a difference of 2 han



Discarding 7 sou here will not give you pinfu and there's a 2 han difference between the good shape and the bad shape.

In this kind of situation, the key here is the amount of dora that you have.

#### You have no dora

The riichi with the good shape is only worth 1300 points, whereas the riichi with the bad shape is four times of that, therefore it is better. Without any dora, declaring riichi with the bad shape is the basics.

#### You have one dora(or there are other yaku worth 1 han, like tanyao)

A damaten with a bad shape(5200), riichi with a good shape(2600) and riichi with a bad shape(8000) are all possible choices. To make a decision, you'll have to look at the points situation here.

In a situation where the points are even, most people will declare riichi with a good shape. Even though damaten is worth twice that of riichi, but if you factor in ura-dora and various other advantages, I feel that riichi is a better choice, especially when you're waiting for number tiles like 3 and 7.

If you're after security, or if you're in the lead, you can choose to stay in damaten. This will give you the possibility of going into betaori.

If it's close to the end of the game and you need tsumo haneman for gyakuten, declaring riichi with a bad shape can be a possible solution.

#### You have two dora

Normally, the condition should be the same as that of dora 1. In a situation where the points are even, declaring riichi with a good shape is superior to declaring riichi with a bad shape.

#### You have three dora

If riichi and damaten are both worth mangan, declaring riichi with a good shape is obviously better.

## 3 Defence Theory

### 3.1 Why do you want to defend?

Japanese mahjong can be said to be the mahjong that pays the most attention to defending. Regardless of the depth of tactics, or the ratio of defending, when it comes to defending it's the champion of all mahjong.

In fact, according to Japanese mahjong researcher とつげき東北's latest work, one of the three most important factors that affects the results of a mahjong player, is the rate of dealing in. (To be more accurate, it should be the dealing in rate outside of riichi and having two exposed melds.)

When beginners see the high level game records of Tenhou special, they will find the players too cowardly. Once someone declares riichi, the other players will dismantle their tiles and aim for a draw. But what I want to tell everyone is, this is an important process in Japanese mahjong. In a usual high level game record, 40% of the games end in a draw.

If you find this kind of mahjong boring, Japanese mahjong is not for you.

Since the frequency of abandoning the win is so high, knowing how to defend is very important in Japanese mahjong. But the main reason why beginners tend to have a higher deal-in rate, **is not because they don't know how to aim for a draw, but because they refuse to. Therefore before I seriously discuss "how to" aim for a draw, I must first explain "why".** Otherwise, if you're not interested in defending, no matter how much I discuss defence theory it'll just be a waste of time.

#### **The payout of a person who dealt-in in Japanese mahjong**

In Japanese mahjong, if you deal in, you'll have to pay the full amount of the hand's value. I believe that everyone knows this. For example, if a player wins with a hand of tanyao dora 3, you'll have to pay 7700 points. But if the player won with a tsumo, you only need to pay 2000 points, thus saving a lot of points.

Everyone please note, do not compare it with Chinese international standard's and Taiwan mahjong's payout, where all players have to pay when someone wins. If the payout for dealing in and tsumo is the same, it will not encourage players to **betaori**.

### The special characteristics of position battle

In Cantonese mahjong, if you deal in this round and lose \$100, you can offset the loss by winning \$100 next round. As everyone is only concerned about their own wallet, no one would care how much the other players win or lose.

However, that's not how it works in Japanese mahjong.

Japanese mahjong compares position, not points. Tonpuusen last hand, you deal in to a 12000 points hand and drop from first to last place. If you win a 12000 points hand the next round, would that offset your loss from the previous round? Of course not.

Also, because of special characteristics of position battle in Japanese mahjong, the point sticks of the other players will affect the outcome of your game. For example, if you deal in to a 8000 points hand, not only will you have a 16000 points gap with the player you deal in to, you will also have a 8000 points gap with the other two players. If the player tsumo instead of winning from your discard, there wouldn't be this problem.

Therefore, when dealing in while playing Japanese mahjong, although the points are only given to a single player, the reality is that you lose to the other 2 players as well.

To iterate my point, defending is an important skill in Japanese mahjong. I understand that sometimes giving up a win is depressing, but this is an important process in Japanese mahjong. *If a beginner wants to quickly improve, practicing to abandon a win is a good method*, as attacking too much is a common problem with Japanese mahjong beginners.

### 3.2 Overview on defending in Japanese mahjong

Starting from this article, I'll begin to talk about Japanese mahjong's defence theory. I will first introduce common defence tactics in Japanese mahjong.

The goal of defending is rather simple, just don't discard the tile your opponent is waiting on. To achieve this, everyone may think: *As long as you know the tile your opponent is waiting on, you won't deal in.*

Alright, now I'll invite everyone to guess, what is the player in the picture below waiting on?



#### "Reading point" is impossible!

The numerous mahjong books available all have theories related to discard reading, where they attempt to read the hand of the opponent just based on the discards. In most mahjong mangas, there are scenes where the opponent's waits are accurately read.

However, reality is cruel. **A situation where you can accurately read the waiting tiles(a.k.a "reading point") of an opponent just by reading the discards is impossible.** The discard reading skill mentioned in mahjong strategy books could be considered impressive with just an accuracy of 30%. Part of the outdated theories have also been proven to be wrong. (Such as ura-suji, aida yon ken etc)

If the reader hopes to learn perfect defence in the future theory discussions, like the emperors of old who tried to seek immortality, you'll only be disappointed.

#### The essence of defence in Japanese mahjong, identifying safe tiles

There is no immortality drug in this world, but there are ways to live longer. There are no techniques that allow you to see through the wait of your opponent, but there are many ways to avoid dealing in, and they are not difficult to learn.

The amount of games I've played in MFC are around 4800, with a deal-in rate of 12.6% in over 20000 hands. (winning rate of 25.1%) Compared to other so called high level Yellow Dragon players who have the similar winning rate as me, my deal-in rate is on an average at least 2% lower. But in my 4 years of playing MFC, I've never tried to guess the waiting tiles of my opponent. This proves that in order to defend well, you don't need any supernatural powers.

In order to defend well in Japanese mahjong, all you need to do is to find the safe tiles. Like the example in the picture above, I believe most of the readers are unable to guess the waiting tiles. This hand has a **shanpon** wait of 3 sou and 8 pin. But what we can be sure of is, you definitely won't deal in by discarding 56 pin, 7 wan and 6 sou.

If you don't follow highly accurate (with at least 98%) safe tile theories, but follow those unorthodox theories with only 20-30% accuracy, it will only end badly for you.

### Strategies when opponent is in tenpai

Against an opponent's riichi, the strategies that you can employ, are the following:

1. **Betaori**

Totally giving up any chance of winning, and at the same time decreasing the chances of dealing-in to the minimum. This is the most commonly used tactic. In this series of articles, more than half the text will be covering this area.

2. **Uchimawashi**

While discarding tiles that have a good chance to be safe, continue to proceed to tenpai. If the tiles that you draw continue to be not useful, you can consider going into betaori. But if you want to be able to perform well here, you need to have good judgment, this can be difficult for beginners to grasp, therefore this article will only be briefly discussing this.

3. **Kanzen Shinko**

You'll discard any tile without hesitation, in simple terms you're ignoring your opponent's tenpai. The important thing to note is, even if the chance of winning is low, it does not mean that you shouldn't go into kanzen shinko. It's fine as long as you attack reasonably. (Translator note: The original text by the author didn't make sense. Therefore, I assumed that it's a typo error and changed it to what I think he really meant.)

Of course there are strategies to deliberately deal in, but the amount of them is too low.

The biggest problem with beginners, is that they go into kanzen shinko and ignore uchi-mawashi too often, and rarely go into betaori. They feel that they'll go into last place if they don't win the current hand. However in Japanese mahjong, as the losses from dealing into riichi is not small (riichi has ippatsu, chance of ura dora, menzen, and many other yaku), if you know your chances of winning is small, you should retreat and minimize your losses.

### 3.3 Genbutsu

From this article onwards, I'll slowly explain the technique of betaori. For the sake of convenience, let's assume only one person is in tenpai.

Firstly, the most important principle in betaori is:

According to how safe a tile is, discard in order starting with the safest tile.

Note, once you decide to betaori, you should discard a tile based on how safe it is, even if it means discarding your mentsu or shuntsu.

On an average, betaori happens 30%-40% of the time, therefore a person's betaori skill will directly affect their score. Today, we'll introduce a few highly safe tiles.

#### Genbutsu(Degree of safety: SS)

Reusing the previous example:



The tiles here discarded by the player who declared riichi, including 56 pin, 7 wan, 6 sou etc, are known as genbutsu. They're 100% safe to the player who declared riichi. Even if the riichi is waiting for the tiles that the player discarded himself, because of the furiten rule, the player who declared riichi won't be able to win on your tile.

Similarly, any tile discarded after the riichi is genbutsu.

#### The fourth word tile(Degree of safety: SS)

Of course, if there is any word tile that has been discarded three times, it should be 100% safe to discard unless it's *kokushi musou*. As kokushi musou has unique discards, and is easily detected by others, added to the fact that the probability of kokushi musou is low, it's degree of safety is on the same level as genbutsu.

#### Tiles discarded by the player before you in the same turn(Degree of safety: SS)

Due to the furiten rule, tiles discarded in same turn by the player before you is also 100% safe.

Basically, these three are the only absolutely safe tiles, I'll continue to introduce other safe tiles based on the degree of safety.

### Exhausted word tiles(Degree of safety: S)

Word tiles that have been discarded twice, even if there's a chance of a hell tanki wait, are relatively safe tile. Firstly, there is little chance of a player who declared riichi to be on a hell tanki wait, because they won't be able to win if the last tile is in the dead wall. Also a word tile waiting on tanki is easy to change, and most would change to a better tenpai before declaring riichi.

## 3.4 Suji-pai

In Japanese mahjong, 60% of tenpai in riichi are **ryanmen** waits. Therefore, if it is certain that some tiles cannot be **ron** by ryanmen tenpai, they are considered to be safe.

### Suji-pai(Degree of safety: S ~ B)

We'll use the previous riichi image as an example.



If the player who declared riichi discards 5 pin, then if you discard 8 pin, then the opponent can't ron on your discard even if he holds 67 pin and is waiting on 58 pin. (According to the furiten rule.)

To ron on 8 pin, the only possibility is **shanpon** and **kanchan**, therefore the probability of dealing in is lower. Similarly, 2 pin, 9 pin, 9 sou are safer due to the fact that they're suji-pai.

If **4** is discarded, **1 and 7** are the suji-pai.

If **5** is discarded, **2 and 8** are the suji-pai.

If **6** is discarded, **3 and 9** are the suji-pai.

We normally remember these three groups as **1-4-7, 2-5-8, 3-6-9**

It is worth noting that, even if 1 sou is discarded, 4 sou is not a suji-pai, as he could still be waiting on 4-7 sou.

By the same token,

If **1 and 7** are discarded, **4** is the suji-pai.

If **2 and 8** are discarded, **5** is the suji-pai.

If **3 and 9** are discarded, **6** is the suji-pai.

The 456 here is called **double suji-pai**. If only one of the suji is discarded, it is called **half suji-pai**.

Note: I found it easier to remember  $\{4, 5, 6\} \pm 3$  than 1-4-7, 2-5-8, 3-6-9 and 456.

### **Difference between degree of safety for different suji-pai**

There are many suji-pai introduced above, but their degree of safety are all different.

For example, the suji-pai of 9 pin, as the chance of ryanmen is eliminated, then it can only be **tanki** or **shanpon** tenpai, the chance of safety is similar to word tiles. If you see two of the 9 pin already discarded, 9 pin can only be hell wait, then the degree of safety is similar to that of tanki word tiles. If you can see three of the tiles, then it's 100Hence, suji-pai of 1 and 9 can be said to be the safest among all suji-pai.

For suji-pai of 2 and 8, not only can it be **shanpon** and **tanki**, it can also be **kanchan** for 13 and 79. Therefore the degree of safety is lower.

For suji-pai of 3 and 7, there can be **penchan** of 12/89 and **kanchan** of 24/68. Therefore, the risk is much higher. The **kanchan** could even be part of a tanyao hand, increasing the degree of harm to you.

As for the double suji-pai of 456, as there can only be **kanchan**, the degree of safety is similar to suji-pai of 28.

In summary, the degree of safety for suji-pai in order is:

**Suji-pai of 19 >> Suji-pai of 28 = Double suji-pai of 456 > Suji-pai of 37**

### 3.5 Kabe

Assuming your opponent is waiting on 58 wan, his hand must have 67 wan each.

If you can see(including your hand, discards and called tiles) four 7 wan, then there's no way his hand is holding 67 wan. 8 wan can only be a shanpon or tanki wait, making it safer.

This 7 wan is known in Japanese mahjong as **kabe**, 8 wan is known as no chance tile. The degree of safety of a no chance tile is equivalent to that of a word tile, therefore the more 8 wan you can see, the safer it is. (If three can be seen, the last one is 100% safe.)

Also, it is known as **usu kabe** if three 7 wan is seen, 8 wan is known as one chance tile. The risk of one chance is between a suji-pai and non suji-pai. The important thing to note is, [as the game continues, the degree of safety for one chance gets lower and lower](#), as the chances of drawing the last 7 wan gets higher and higher.

#### Fusion of kabe and suji

Effective use of kabe and suji can help determine more safe tiles, listed below is a few common examples:

- a) If 4 and 7 are both kabe, then 5 and 6 are the same as word tiles, they can only be tanki or shanpon waits.
- b) If 9 has been discarded, 6 is half suji-pai. If 4 is a kabe, because 45 cannot form with 6, the degree of safety for 6 is equivalent to double suji-pai. It would be even better if 5 is a kabe, as 6 is on the same level as suji of 1 and 9.

### 3.6 Tile Risk Table

Theories regarding kabe and suji have already been covered, next will be a summarization of the different degree of safety of tiles, making it into a risk table.

	Grade	Type	Explanation
Betaori discard area	SS	Genbutsu	Definitely safe
	S	Tanki word tile	
	A+	Suji-pai of 19	Only allow tanki and shanpon, it's safer as more tiles are seen outside.
	A	Guest wind tile	Similar to 19, but obviously the chances of waiting on word tile tanki is higher than 19 tiles.
Tiles that can be tolerated when retaining a good shape while in iishanten	B	Suji-pai of 2 and 8	
		Double suji-pai of 456	Other than tanki and shanpon, kanchan is a possibility.
	B-	Suji-pai of 3 and 7	As there is a penchan possibility, therefore the degree of safety is lower than suji-pai of 2 and 8
	C	Yakuhei	If there's a shanpon, dealing in would also include 1 han, therefore it's dangerous.
Tiles that won't be discarded if not in tenpai.	D	Non suji-pai of 1 and 9	Ryanmen tenpai possibility, in other words there's a huge chance of pinfu.
		Half suji-pai of 456	
	E	Non suji-pai of 2837	
	F	Non suji-pai of 456	All kinds of waits/yaku is possible, most dangerous tiles.

The risk ordering above, should be memorized by beginners, because the ordering above decides what tile to discard first when in betaori, which heavily affects deal-in rate.

## Risk Factors

The table above refers to normal situations, you should consider the following in a real game:

### 1. Dora

As there will be more points from waiting on the dora, waits on the dora can be predicted. When the dora is a **chunchan**, the deal-in rate is 1.5-1.6 times of the normal rate,

while when the dora is a **yaochuhai**, the deal-in rate increases to 1.8-1.9 times.

Also, the tiles near the dora (a.k.a dora soba) have a 10% increase in deal-in rate.

Hence, *the degree of safety of the dora tile, yaochuhai's grade has to drop 3 grades, chunchan has to drop 2 grades. While the dora soba has to drop 1 grade.*

### 2. One chance tiles

The degree of safety for one chance tiles is roughly between non suji-pai and suji-pai.

### 3. The outer tiles of early discarding of 28,37

If the attacker discarded 28, 37 number tiles early, the outer tiles will be safer than usual. (For example if the player who declared riichi discarded 8 sou, then 9 sou is relatively safe.) Deal-in rate is 30% lower than usual.

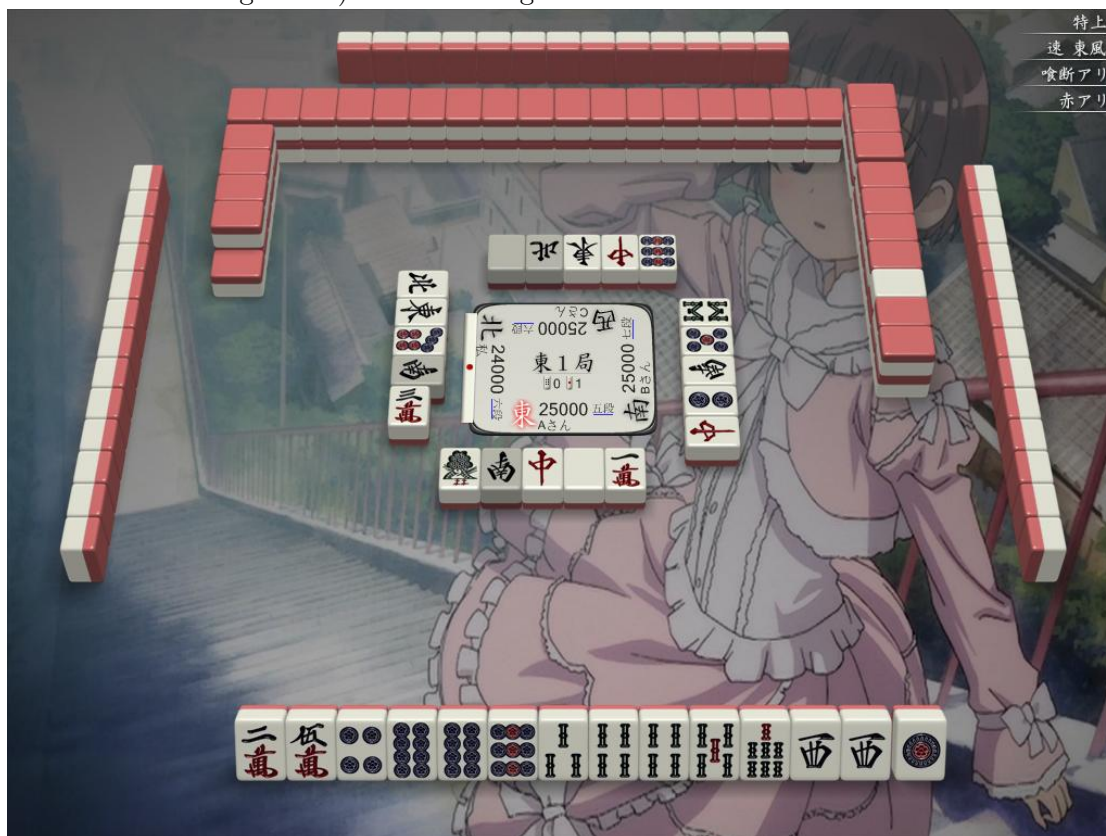
Also, there are many discard reading books about ura suji, aida yon ken, matagi suji on the market. You might be wondering, why hasn't there been any talk about discard reading.

The reason is because according to game record statistics from 東風莊's super high level tables, this so called discard reading **does not affect the risk of related tiles**.

So when you're in betaori, it's better to ignore these "skills".

### 3.7 Requirement for Betaori

When should we go into betaori? (To a certain degree, this is a discussion about offence and defence for beginners.) Look at the game below.



Kamicha declared riichi at the fifth discard, what should you do?

Discard west here, just for this discard. Someone who discards anything else, might not have the qualifications to discard on the level of "Special". (Translator note: My guess is that the author is referring to a ranking called "Special".)

The hand is currently in suushanten (4 away from tenpai), while kamicha is in tenpai, the situation is like you're 50m behind someone in a 100m race, don't even think of trying to catch up. Additionally, avoiding a deal-in while trying to reach tenpai is a difficult problem.

Betaori is the only way for this sort of tiles. Thoughts like *"Oh, let's discard 1 pin and see what happens next"* should be avoided at all cost. You must discard the safest tile, Shaa, here. Remember, **when in betaori, start with the safest tile.**

Usually, **if you want to pursue riichi or challenge someone in tenpai, you need to have an iishanten or better with a good shape.** For anything ryanshanten (two away from tenpai) or below, unless there are no safe tiles or the situation is special, please do not hesitate going into betaori.

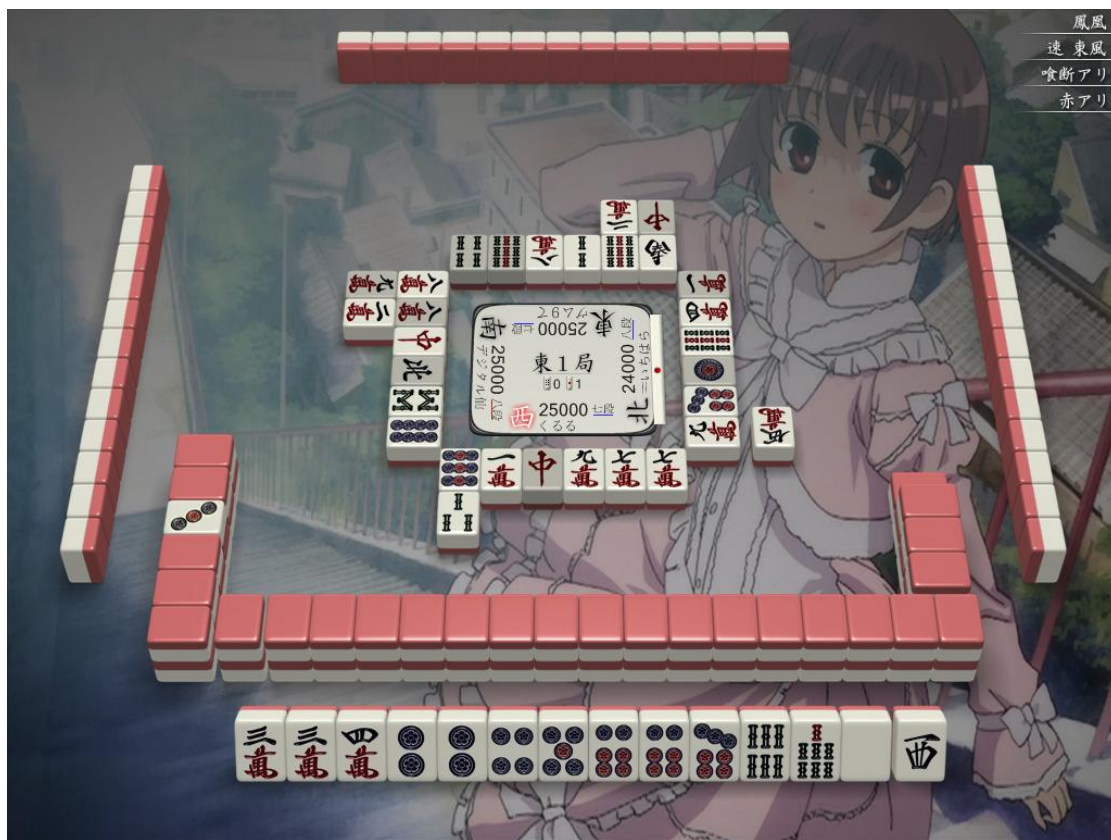
In Japan, some high quality tactics discussion recommend beginners to employ a simple offence and defence baseline.

*Once an opponent declares riichi, if your hand is already in tenpai, then attack immediately(or pursue riichi), or else go into betaori.*

Do not underestimate this method of judgement, if everyone can execute this perfectly, going up to 3 dan, or even entering "special" might not be a problem.

### Shanten number, is more important than hand value

The largest factor in deciding whether or not to attack, is your own shanten number, the hand value is a secondary factor. Because, if you win, your opponent's chance of win disappears at the same time. A hand worth 3900 points in tenpai, is better to attack with than an iishanten hand worth 8000 points.



The hand in the image above has a high chance of becoming a mentanpin (MENzen TANyao PINfu) dora 1 mangan hand. But as shimocha declared riichi, and your hand is still in ryanshanten, you should immediately go into betaori.

In this discard, discarding the live tiles shaa or haku is very dangerous. You should discard the two genbutsu, and go into betaori. Most beginners find that it's very unnatural to go into betaori here, but having the courage to go into betaori with such good tiles, is an important step to improving.

### 3.8 Important points of betaori (1)

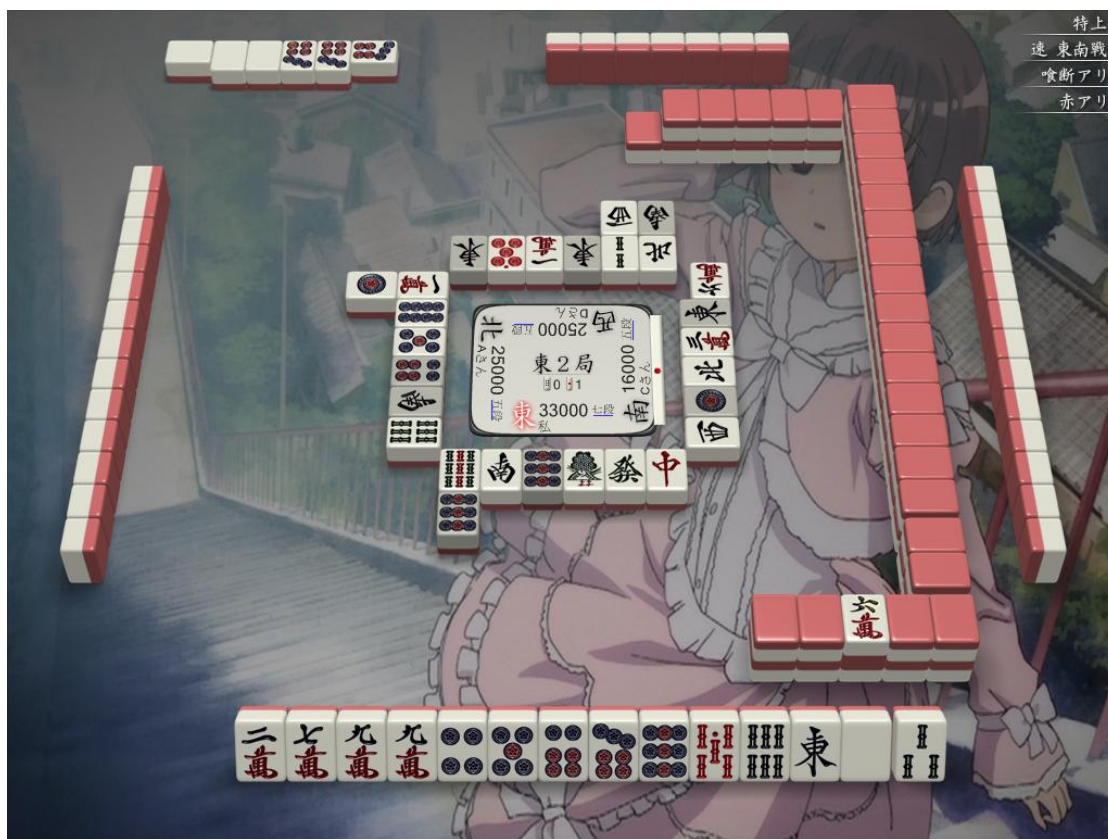
Again, **betaori is totally giving up your chances of winning, reducing your chance of dealing in to the lowest.**

Hence at this stage, especially for those who are new to betaori, don't be afraid to dismantle good mentsu or taatsu, or attempt to reach tenpai or even try to win.

The text below will start to explain the related points.

#### 1) Betaori starts with the safest tile

If the reader paid attention to the previous articles, then you should know that this is not the first time I've said this. As this is an important principle in betaori, I'll patiently repeat it once more.



Shimocha declares riichi, it's obvious that this situation requires betaori. A hand in suushanten (four away from tenpai), and because I am the **Oya**, recklessly trying to attack will only lose even more badly.

When you're in betaori, you better prepare to **sort out the safe tiles in your hand in order.**

Which are the safest tiles now?

The safest tile is of course ton, the genbutsu of **shimocha**. As haku is already pon by **toimen**, therefore it's a 100% safe tile. At the same time, don't forget that 7 pin was pon by shimocha, therefore it's also a genbutsu.

What's the fourth safest after that?

A lot of people think that it's suji of 9 wan... The correct answer is 9 pin. Toimen pon the 7 pin, and the last 7 pin is in your hand, in other words, 9 pin is a no chance tile. There is also two other 9 pin discarded, 9 pin can only be a tanki wait, it is the fourth safest tile. 9 wan is a suji-pai, but there are no other 9 wan discarded, therefore it's degree of safety is lower.

Therefore the betaori discard order in this situation is:

Ton/haku -> 7 pin -> 9 pin -> 9 wan -> 9 wan

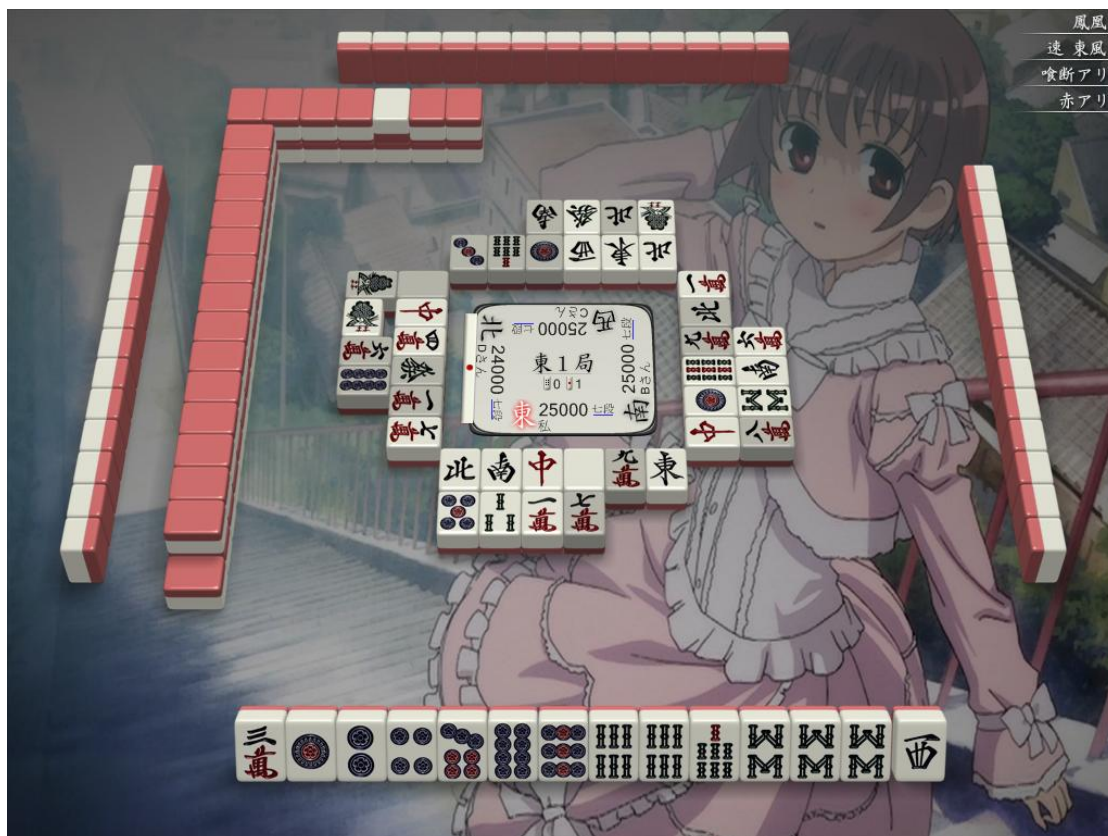
**The most common mistake by beginners, is over reliance on suji-pai**, discarding 9 wan thinking that it's relatively safe. This is a bad habit, because it is not rare to deal in over careless mistakes.

The thing to note is, after discarding genbutsu for 2 turns, more genbutsu could appear, and you may not even need to discard 9 wan. Don't underestimate such triviality. During a few hundred games you play, there could be a few hundred hands you need to go into betaori for, and a stricter betaori could cause you to deal in a few hands lesser.

## 2) Try to hold on to safe tiles common to multiple players

On the other hand, [once your hand holds several genbutsu, and you decide to go into betaori, I will first discard genbutsu of number tiles.](#)

The reason is that if another player starts to attack later, then your word tiles could be used to defend against both players. The danger about holding genbutsu of number tiles is, once another player declares riichi, this safe tiles will turn into dangerous tiles.



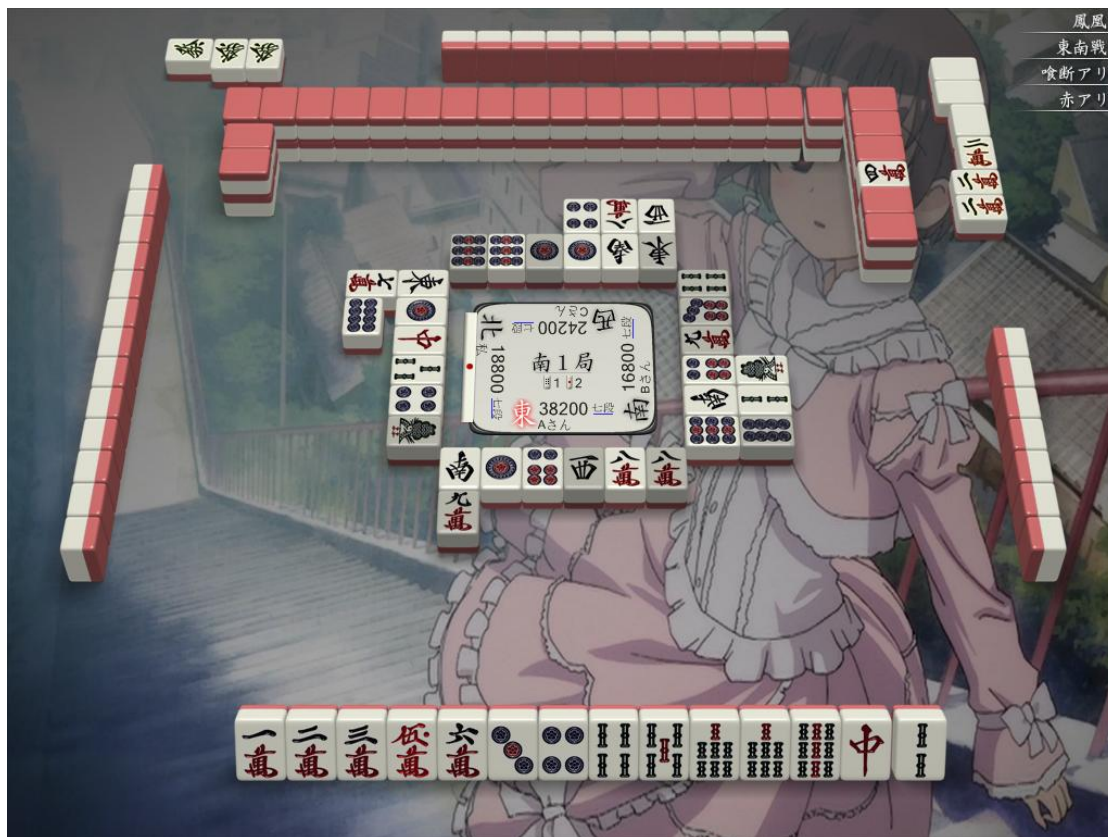
The situation is currently in betaori. The 8 pin discarded by kamicha is a new genbutsu. You should discard 8 pin here, and keep the shaa, which is relatively safe to the other players. In the real game, toimen discarded 3 sou and declared a pursue riichi. This shaa became an important safe tile.

[illegible]

There are people who assume that there is no difference between 8 wan and 9 pin, this is a casual thought. Betaori is not just discarding the genbutsu of the player who declared riichi. **A person who is excellent in betaori, will take careful note of the order he discards his tiles.** Remember, your enemy is not only the one who declared riichi.

### 3.9 Important points of betaori (2)

We now want to develop your perception of betaori while also introducing some high level techniques.



It's south round first hand in the above picture, kamicha declares riichi on the 8th discard, what should Ton (East) do?

First you should find out, is this a situation to go into betaori for?

Ton gained a considerable advantage from the east round, **the important thing to do now is to reduce the amount of points loss in the south round.**

Even though the pinfu dora 2 is a good hand, but it's only ryanshanten, in a situation where you're leading, I believe going into betaori is a correct choice.

Once you know you need to go into betaori, the next step would be finding the safe tiles. The genbutsu of kamicha are currently 4 pin and chun. While 1 wan is the safest tile outside of genbutsu. (1 wan is a no chance tile, don't forget the 2 wan that was pon.) I'll take the opportunity to mention, a lot of beginners believe that just because kamicha discard 1 and 3 sou, 2 sou would be a safe tile. This is a misconception.

Then, the genbutsu of 4 pin and chun, which should be discarded first?

I will first discard 4 pin, there are two reasons for this:

1. Currently, 4 pin is an **absolutely safe tile**. (Kamicha has discarded 4 pin before, therefore he/she cannot win on the 4 pin.)
2. Another reason for discarding 4 pin, is expecting shimocha to call on it and continue to attack.

From this current situation, kamicha who is in third is in riichi, shimocha who is in fourth won't go into betaori easily. Deliberately letting shimocha call your tile, is to cause a situation where both players attack each other, increasing the chances of dealing in for both players. **In other words, decreasing your chances of dealing in.** This is a practical high level technique.

A lot of readers may feel that discarding chun and maintaining the taatsu is still commendable. However everyone has to understand this, to reach tenpai with this hand, ***you need to gamble on discarding 2 sou and 9 sou***, both of which are not suji-pai. With this situation in points, this is too much of a gamble.

Betaori, is not just about finding a few genbutsu and discarding them. One of the important points of an excellent betaori technique, is to take stock of the situation, list out an accurate discard order, and genuinely decreasing your chances of dealing in to the lowest.

### 3.10 When there are no safe tiles

The betaori techniques mentioned before, were all assuming that you had enough safe tiles. Usually, when someone is attacking and you hold two or more safe tiles, there's a high chance of avoiding a deal-in. The reason is that once you have discarded two safe tiles, chances are there'll be more safe tiles.

According to statistics, when your hand is closed, there's a 50% chance of drawing a safe tile. (Including the tiles discarded by the player in riichi or other players, and the tiles you draw and confirmed to be safe tiles.)

Even so, there are times when we have no safe tiles when someone is attacking. The following text will introduce a few commonly seen methods.

1) Dismantle anko/toitsu

This is the most commonly seen method, mainly based on the idea that "betting on a dangerous tile can buy a few safe tiles".

Sometimes, just when we've just dealt with all the word tiles, the opponent declares riichi.



If your hand is a ryanshanten hand, it is rather far-fetched to attack a player who's already in tenpai, going to betaori here is the norm.



However there are no safe tiles here. In normal situations, I would recommend discarding the half suji-pai of 6 wan. Betting on a dangerous tile can buy a few safe tiles. If there are no safe tiles even after discarding finish all three 6 wan(the probability is very low), you can still rely on suji-pai of 3 wan.

By the way, if the attacking player discards 9, and if you have 3 and 6 in your hand, discarding 6 is **tesuji**.

This idea remains useful even when there are safe tiles available. When someone declares riichi, and your hand is like this:



The only suji-pai is 3s, and 1 pin is one chance, while the rest are not suji-pai.

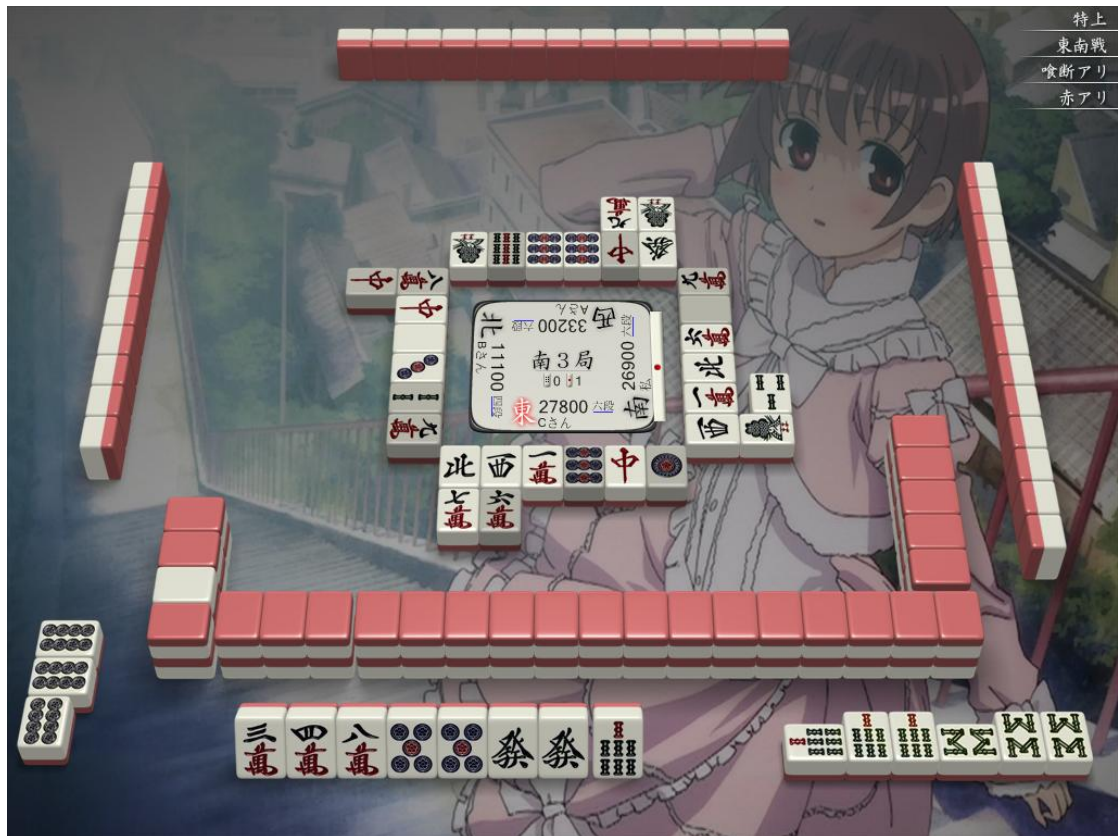
As the suji-pai is a dora soba, you might not feel comfortable in discarding it, therefore you can discard the riskier 1 wan. Once 1 wan passes, you won't have to worry about

not having any safe tiles. You're already in a dangerous situation, and if you discard 3 sou first and don't get any safe tiles in the next discard, you'll still have to discard 1 wan. Compared to discarding 1 wan before, 3 sou becomes a pointless risky tile.

## 2) Kanzen Shinko

When you don't have any safe tiles, going into kanzen shinko is also a choice, especially when you have called any tiles.

You have to understand, that the lesser the amount of tiles in your hand, the lower the chances of new tiles appearing for the next round of discards. Of course, whether or not to attack, is also dependent on the points situation.



Like the example above, there's only one suji-pai of 3 wan, it is logical to discard 8 wan or 7 sou to kanzen shinko. Even if you discard 3 wan, you'll probably need to discard more dangerous tiles in the future. Even though the chances of winning is low, but the value of the hand is high enough and you're the dealer. Summoning up your courage and attack seems to be the only choice here.

### 3.11 Defence against melded sets

Everyone might be thinking that defence against melded sets are harder to deal with, as you don't know when the other side is in tenpai.

However, up to a certain degree, mentsu that are melded allows you to find out the situation of your opponent's hand. From there you can formulate better and more accurate offence and defence tactics.

Mentsu that are melded, at the very least allows you to know the following situations.

1. You can predict the yaku your opponent wants, estimate the value of the hand and then the area of waiting tiles from there. Sometimes when we know the opponent has a small value hand, we can consider not going into betaori.
2. You can know the order of mentsu forming and along with discards, you can find out the area of dangerous tiles more accurately.

Also, even though the player with melded sets cannot declare riichi, but based on the situation of the game, we can usually estimate whether the opposite side is in tenpai, this sort of tile reading is highly accurate.

The following are commonly seen methods of finding out if someone is in tenpai.

#### 1) Opponent's amount of melded sets and time

Normally, you know whether an opponent is in tenpai from the following:

- a. 3 melded sets at any time
- b. Several tiles change occurring after 2 melded sets
- c. 1 melded set near the end of the hand

Unless the opponent is calling tiles randomly, otherwise these sort of behaviour is no different from declaring riichi.

#### 2) Opponent's discards

The most important thing to note is whether or not the opponent has [discarded tiles related to major yakus](#). Example:

- a. Discarding manzu when making a manzu chinitsu.
- b. Discarding a middle tile dora after calling middle tiles.
- c. Discarding chun while it's a live tile, after having pon on haku and hatsu.

When situations like these occur, the opponent is probably in tenpai, at the very least in iishanten. Also, *if the opponent continuously discards the tiles they draw or discard a very safe tile, this signifies that the opponent is in tenpai.*

### **3) The action the opponent takes when other players attack**

This sort of tile reading is useful when playing in high level games.

You can tell that an opponent with melded sets is in tenpai, when he takes the following actions even when another player takes an obvious offensive stance.

- a. continue to call on tiles
- b. continue to discard dangerous tiles

Of course, knowing whether or not the opponent is in tenpai is just the first step. The next step would be determining the value of the hand and the area the waiting tiles are in. This will be discussed in the next article.

### 3.12 Detailed explanation of each type of melded sets (1)

As melded sets will expose information regarding the hand, if used appropriately, it will greatly help in making the proper judgement. Our aim is to use the melded sets to deduce the following.

1. Value of the hand
2. Area of waiting tiles(Or from another perspective, which tiles are safer.)

The following will explain in details the commonly seen types of melded sets.

#### 1) Calling middle tiles

This can be said to be the most commonly seen melded set in Japanese mahjong.

Of course, the melded sets of the opponent are all middle tiles. The largest characteristic about calling middle tiles is that it's difficult to form with other yaku. (Among them, tanyao sanshoku has the highest chance of appearing, but even the chances of getting it is not high.) Hence, the amount of dora in the hand is the determining factor of the hand's value.

So once middle tiles are called, you first need to estimate the whereabouts of the dora. One hand of game has 7 dora(four indicated dora and 3 aka dora). **The more dora you can see, the lower the chances that the opponent has a huge amount of dora.**

Also, if the attacker is really proactive at calling tiles(for example, calling 1 or 2 mentsu very early), then the chances of having a high value hand is higher. Sometimes when we know that there is a high chance that the opponent only have a 1000 or 2000 points hand, we can consider ignoring them.

Against calling of middle tiles, it's easier when it comes to defending, as any **yaochuhai** is a safe tile. However, as the area of waiting tiles is narrow, over reliance on suji-pai and one chance tiles, especially **dora soba**, can be dangerous.

#### 2) Somete

Like calling of middle tiles, this is also a commonly seen melded set. It's easy to judge if it's a honitsu or chinitu melded set, as you can see it from your opponent's discards.

Somete has a narrow area of melded set and can be easily recognized, but it's return is usually higher. Somete usually have at least 3900 points, mangan or even haneman are not a rare sight.

For this reason, somete has defence theory like suji-pai etc. Unless it's a genbutsu or tiles incapable of becoming mentsu, or else it's a dangerous tile.

#### 3) Toitoihou

Toitoihou attacks are a common sight in beginners' games, but in higher levels of mahjong games, the chances of appearing is lower. When the opponent often pon tiles, and the

discards are made up of random middle tiles, then the chances of toitoihou is large.

The lethality of toitoihou is not low either, it's normally between 2500 to 8000 points. Additional han values are usually from yakuhai 9 out of 10 times. So if you note the yakuhai that have not yet appeared, you can probably estimate the value of the opponent's hand.

As toitoihou is always waiting on tanki or shanpon, there are no suji-pai. **Live tiles, no chance tiles and yakuhai are all ultra-dangerous.**

Tenpai is usually on easier waits, therefore middle tiles that have been discarded twice are relatively safer. And when we go into betaori, sometimes we would discard koutsu middle tiles.

#### 4) Yakuhai

Yakuhai tiles are express tickets to winning. You'll get yaku as long as you can pon with it, and as it restricts tile shapes the least, it becomes easier to form hands.

Not only is it easy to combine it with other common yaku(toitoihou, honitsu), a dealer's double ton or yakuhai dora 2/3 are all powerful attacking methods in Japanese mahjong.

As the hand varies greatly, it's harder to deduce the value and waiting tile of the opponent's hand. Normally, the first thing you should do is to note the amount of dora tiles that have not yet appeared, and whether or not the opponent's discards show any characteristics of other yaku.

As for defending, once the signs of being in tenpai appears, treat it as a normal riichi as the waiting tile is not restricted. But as there are melded sets, we can obtain more information regarding what tiles are safe or dangerous:

- a) Tiles that have not appeared, are all dangerous tiles.  
(Translator note: For those of you who can read Chinese, you might notice that I didn't translate this sentence fully. The reason is that it didn't make any sense. The author said that the tile discarded by the attacking player after making the final mentsu is a dangerous tile. Since the attacker cannot ron on a tile he discarded, how can that be a dangerous tile? I will leave it like this until I understand what he really meant.)

The sentence in question:

場上没有見過的牌, 或者是攻擊方做完最後一面子時打出的牌, 都是危險牌.

- b) Tiles discarded by the **kamicha** of the attacking player but have not been called, are usually safer. The reason is that this proves that that tile is not need by the attacking player. (If it's a menzen, even if others discard a tile you want, you can't call on it.)

### 3.13 Detailed explanation of each type of melded sets (2)

The melded sets mentioned in the previous article, all belong to "sakidzuke katachi". What it means is that the melded sets are related to yaku.

Sometimes, the first and second melded sets of the opponent may not be related to yaku. The aim of calling those tiles is to get rid of the bad shape of the hand. This type of attack is referred to as "atodzuke katachi", for example:



or



Normally, "atodzuke katachi" melded sets have a higher value than "sakidzuke katachi", but as the possibility of the hand is heavily restricted, it's not hard to find out what tiles are dangerous. This article will discuss how to defend against this type of attack.

These two are commonly seen atodzuke yaku:

1. Yakuhai
2. Sanshoku, Itsuu, Honitsu

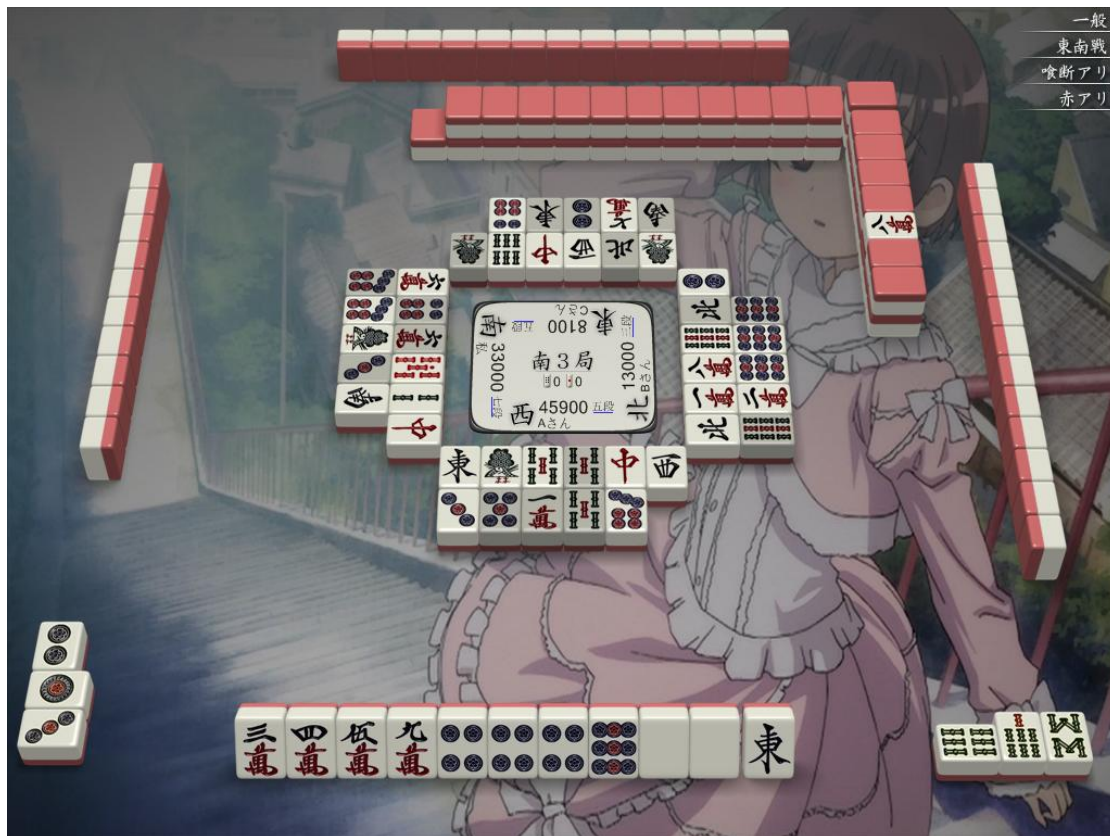
Among them, yakuhai has the highest probability of appearing. So once melded sets appear, the first thing you should check for are live yakuhai tiles (tiles you can make koutsu with). If you have such tiles, there are two choices you can take:

- discard it immediately, hoping that the opponent is not in tenpai.
- keep it until the end of the hand.

If the opponent starts to discard the tiles he draw, then the chances of being near tenpai is high. The live yakuhai tiles now are dangerous tiles, and should not be discarded.

If you've made sure that yakuhai is not possible, then the only possibility now is sanshoku and itsuu. Most of the time, you can rely on the discard pond to estimate the tiles related to yaku, and avoid discarding them. As for the value of the hand, you can estimate using the amount of dora you haven't seen. If the dora is related to yaku (for example the dora is **yaochuhai** and the hand is **chanta**), you need to be more careful.

Here's a simple example:



Kamicha called 2 pin. You can tell that it's not a honitsu by looking at the discards. You can see four 4 sou and 9 pin, therefore the chances of itsuu and sanshoku are gone. The only possibilities left are chanta and yakuhai. From the discards, the possibility of the former is rather high.

The yakuhai that has not appeared yet are haku and hatsu, and since 9 wan is the dora, these three tiles are highly dangerous. Secondly, the tiles that can form shuntsu of 123 and 789, like 78 sou, 2378 wan etc are not safe.

Therefore, these tiles must not be discarded.

### 3.14 Defence theory against two or more players (1)

For the sake of simplicity, the previous theories assumed that only one player was attacking. However that is not the case in real games. Situations where one player declares riichi and another player pursues riichi or goes into kanzen shinko are not rare.

The author mentioned before that if your order of discarding during betaori is done properly, it will effectively raise the chances of having safe tiles to discard when many players declare riichi. However, there will still be times when you have no safe tiles to discard. It is at times like this, where making good judgement becomes even more important.

#### General direction

The aim of defending is to avoid dealing in, but when this doesn't work, avoid dealing in to big hands is the second best practice.

When facing riichi from two players and above, avoid dealing in as the value of the hand is hard to estimate. But if there are melded sets, we can estimate the value of the hand with the exposed tiles and discards. If we know that the value of the hand is small, we can ignore that player or deliberately deal in to him.

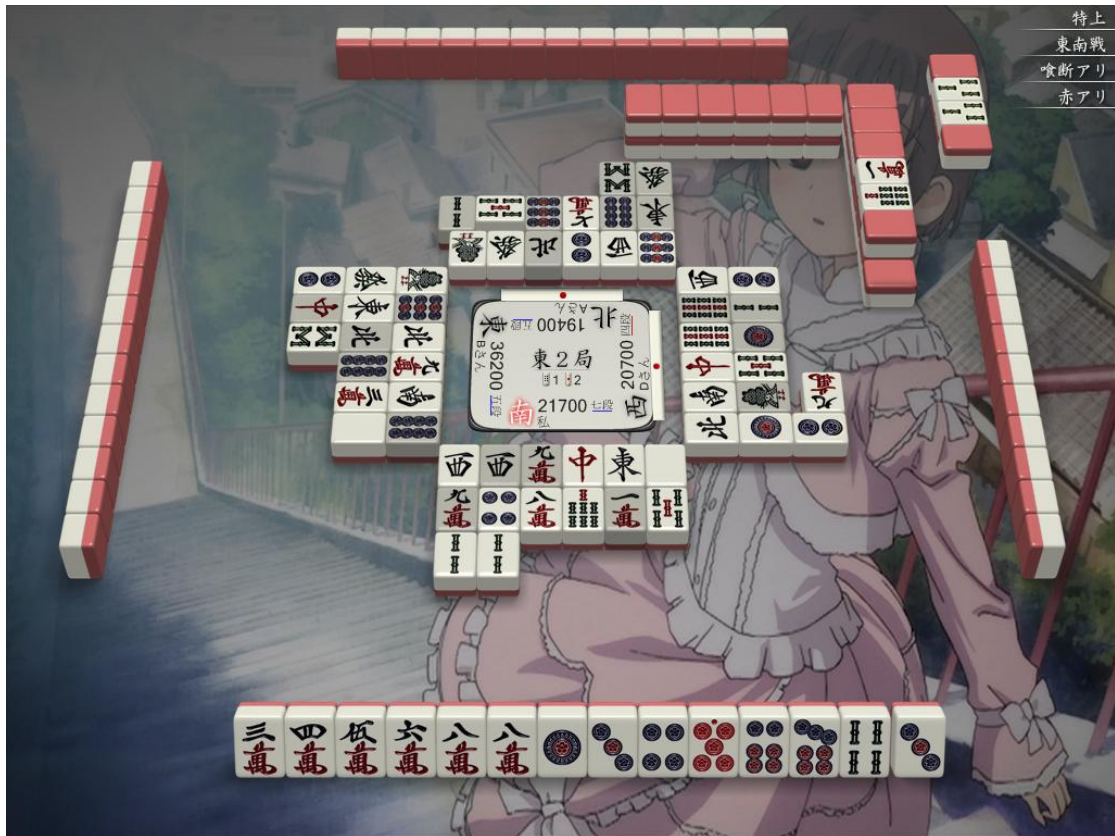
#### Finding safe tiles

Firstly, we need to find genbutsu that both players have, but there may not be any most of the time. The following is the usual way to discard:

1. Genbutsu of both players
2. Genbutsu of one player, suji-pai of the other
3. Suji-pai of both players
4. Suji-pai of one player, non suji-pai of the other
5. A middle tile that is a non suji-pai

However as safe tiles increase quickly(as any discard by either players become genbutsu for both players), therefore the method mentioned previously where you discard toitsu might not be useful here...

Instead, appropriate use of tile reading and situation judging will be of great use here.



Two players declared riichi, what is the safest tile in your hand?

The safest tile is 1 pin. Four 2 pin and two 1 pin have already been discarded, therefore 1 pin can only be a hell wait.

If there's no safe tile in the next round, personally I will discard 4 sou. Shimocha made an ankan with 3 sou and 5 sou was discarded 3 times, the chances of 4 sou becoming mentsu is the lowest.

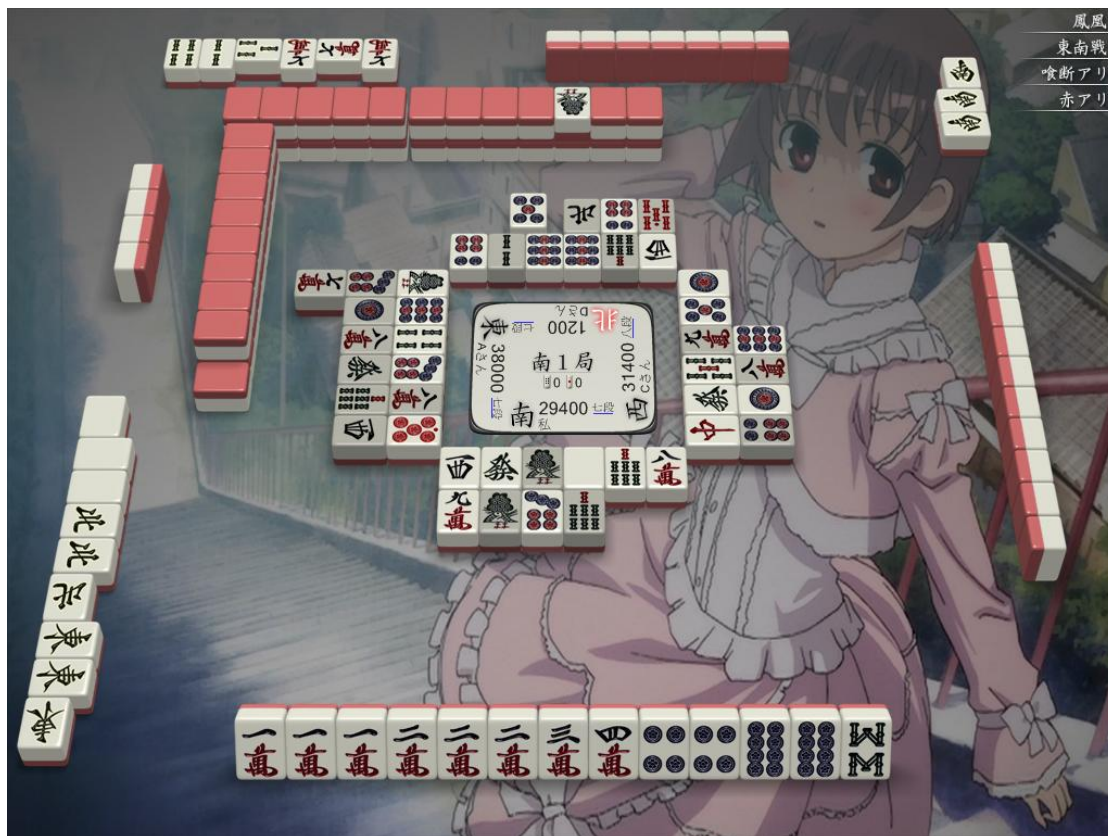
As for 8 wan and 3 pin, they are very dangerous as the tiles near them have not been discarded. For this round of discards, if the 4 sou passes, you should be able to make it to *ryuukyoku*.

A screenshot of a Mahjong game interface. The background features a character in a pink dress. The game board shows a central hand with a score of 20700. The hand is composed of the following tiles: 1 East 1 (Red), 1 East 2 (Red), 1 East 3 (Red), 1 East 4 (Red), 1 East 5 (Red), 1 East 6 (Red), 1 East 7 (Red), 1 East 8 (Red), 1 East 9 (Red), 1 East 10 (Red), 1 East 11 (Red), 1 East 12 (Red), 1 East 13 (Red), 1 East 14 (Red), 1 East 15 (Red), 1 East 16 (Red), 1 East 17 (Red), 1 East 18 (Red), 1 East 19 (Red), 1 East 20 (Red), 1 East 21 (Red), 1 East 22 (Red), 1 East 23 (Red), 1 East 24 (Red), 1 East 25 (Red), 1 East 26 (Red), 1 East 27 (Red), 1 East 28 (Red), 1 East 29 (Red), 1 East 30 (Red), 1 East 31 (Red), 1 East 32 (Red), 1 East 33 (Red), 1 East 34 (Red), 1 East 35 (Red), 1 East 36 (Red), 1 East 37 (Red), 1 East 38 (Red), 1 East 39 (Red), 1 East 40 (Red), 1 East 41 (Red), 1 East 42 (Red), 1 East 43 (Red), 1 East 44 (Red), 1 East 45 (Red), 1 East 46 (Red), 1 East 47 (Red), 1 East 48 (Red), 1 East 49 (Red), 1 East 50 (Red), 1 East 51 (Red), 1 East 52 (Red), 1 East 53 (Red), 1 East 54 (Red), 1 East 55 (Red), 1 East 56 (Red), 1 East 57 (Red), 1 East 58 (Red), 1 East 59 (Red), 1 East 60 (Red), 1 East 61 (Red), 1 East 62 (Red), 1 East 63 (Red), 1 East 64 (Red), 1 East 65 (Red), 1 East 66 (Red), 1 East 67 (Red), 1 East 68 (Red), 1 East 69 (Red), 1 East 70 (Red), 1 East 71 (Red), 1 East 72 (Red), 1 East 73 (Red), 1 East 74 (Red), 1 East 75 (Red), 1 East 76 (Red), 1 East 77 (Red), 1 East 78 (Red), 1 East 79 (Red), 1 East 80 (Red), 1 East 81 (Red), 1 East 82 (Red), 1 East 83 (Red), 1 East 84 (Red), 1 East 85 (Red), 1 East 86 (Red), 1 East 87 (Red), 1 East 88 (Red), 1 East 89 (Red), 1 East 90 (Red), 1 East 91 (Red), 1 East 92 (Red), 1 East 93 (Red), 1 East 94 (Red), 1 East 95 (Red), 1 East 96 (Red), 1 East 97 (Red), 1 East 98 (Red), 1 East 99 (Red), 1 East 100 (Red). The hand is surrounded by other tiles and a score display.

The next article will talk about more complicated examples.

### 3.15 Defence theory against two or more players (2)

At the beginning of a hand in a phoenix hanchan, the point spread was rather special: Toimen only has 1500 points, while I only lag behind shimocha by 2000 points in third place.



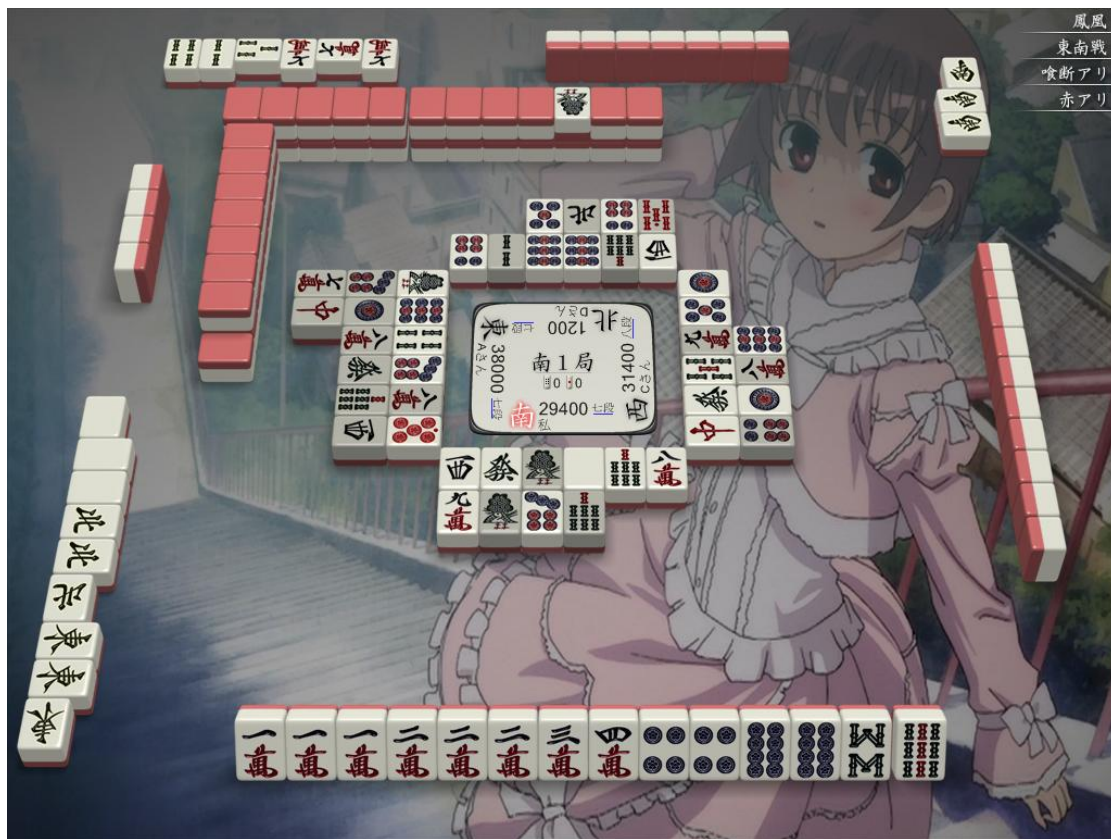
Originally, I had hoped to declare riichi with this hand. It's a good thing even if I knock out toimen and end up as second place.

However, it was frightening when kamicha called 3 sets of tiles early in the game. Even though I knew that if kamicha had tsumo, I would end as third place, but because my hand was not in tenpai, I had to go into betaori.

Shimocha seeing this situation, naturally goes into betaori. The one you have to take special note of is toimen who is in fourth place.

I followed kamicha's discard and discarded 7 wan, which toimen pon'ed on, indicating that toimen is not in betaori. As I mentioned previously, attacking during situations where betaori is needed, is a sign of being in tenpai. Therefore not only do you have to defend against kamicha, you have to be careful of toimen.

I discarded the genbutsu of kamicha, 7 sou, and drew 9 sou next.  
What should I discard?



As both players have exposed melds, we can analyze it a little bit.

Let's talk about kamicha first.

Kamicha called three sets of tiles early in the game, and has been discarding what he drew since the sixth discard. Obviously, he's in tenpai and his hand is not only worth 3900 points. (If kamicha's hand only has 3900 points, with this kind of points situation, there's no need to go into betaori.)

Honitsu and toitoi-hou is the most likely here. **In other words, kamicha has at least a mangan, even a 18000 points dealer haneman is possible**, that's why it's frightening. As the discards of kamicha is too neat, we are unable to find out which suit he's waiting on. However since kamicha discarded quite a lot of pinzu early, the chance of a pinzu honitsu is the lowest. Also, in order to avoid toitoi-hou, you must avoid discarding any live tiles. **Thus, the 8 and 9 sou in your hand is the most dangerous.**

As for toimen, the hand is most likely a tanyao. Since dora was discarded, the value of the hand shouldn't be too high. It would be 3900 points even with aka-dora, the danger is low but you shouldn't be careless. Since you're in betaori, you might as well avoid dealing-in, although the main focus is on kamicha.

After some deliberation, I discarded 8 pin.

Although 8 pin is a live tile, it's also the suji-pai of toimen, giving it some degree of safety.

Kamicha discarded 7 and 9 pin earlier on, if kamicha had 7889 pin on the early stages, [he wouldn't have discard 7 and 9 pin](#) in a situation where honitsu is confirmed.

Hence, [we can conclude that kamicha discarded 7 and 9 pin while dismantling a taatsu](#). Since kamicha discarded 5 pin, a ryanmen wait on 58 pin is eliminated, thus 8 pin has a huge chance of passing.

And it did pass: [Game Replay](#)<sup>1</sup>

These sort of safe tile judging in betaori is not easy, as it involves a lot of analysis and theory.

Also you'll need to pay attention to other players, to make the correct decision. These last two articles can be said to be an example to show everyone what to focus on when finding safe tiles.

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<sup>1</sup><http://tenhou.net/0/?log=2009111021gm-00a9-0000-7abebfc0&tw=1&ts=5>

### 3.16 Tricks to defending

In the previous articles, we discussed betaori techniques when someone has declared riichi or when defending. However, [to truly defend is not just about defending when someone attacks](#). As the discards increases, the chances of the other players reaching tenpai increases. If you put in a little effort in some details, you can avoid dealing in.

A few commonly seen techniques are shown below.

#### Discard the good tile first, Keep the safe tile

For example, like the hand below:



A hand in iishanten, and the 4 sou is an useless tile.

Let's assume that you next draw a dead tile, nan. If the situation doesn't look dangerous, you'd normally discard 4 sou first. This is what it means, discarding the good tile first.

The theory behind discarding the good tile first, is that 4 sou has a higher chance of becoming a dangerous tile than nan in the future. Since 4 sou is useless to us, you should discard it before someone reaches tenpai, in order to get rid of the risky tile that would be in your hand when you reach tenpai.

The tactic about keeping the safe tile should not be abused.

If we change 4 sou to 7 sou ...



... the situation is very different.

If you draw nan this time, you should definitely discard it.

Previously when I was still playing in high level games in 東風莊<sup>1</sup>, I would discard 7 sou and keep nan with these type of hands. But in modern day mahjong theories, this is a conservative method. In the image above, there are 20 tiles that can be added into the hand. But if we were to discard 7 sou for a safe tile, the number of effective tiles would be 16. This a significant 20% loss when compared to the former.

<sup>1</sup>another video game, I suppose.

The first condition when keeping the safe tile is to not sacrifice tile efficiency. With the hands below, a safe tile would be discarded if drawn.



At the beginning of the hand, 4 sou should not be discarded, it has a chance of becoming a ryanmen.



As 2356 pin has effective tiles repeating, it cannot be considered as a good shape. At the beginning of the hand, 7 sou should be kept, but can be tricky after the middle discard rounds.

## Going into betaori early

Mahjong is played by four players, and each player has a 25% chance of winning. Among them are hands that have very little chance of winning, for example:



This is a sanshanten hand with many bad shapes, and there is no way to increase the speed via calling tiles.

If your hand remains this way even after the 5th or 6th, unless you make godly draws, your chances of winning is close to zero. Since you can't win, you should try to minimize your losses. Hence going into betaori is the best choice here.

Discard tiles that have been discarded by other players(kamicha would be the best) in the same discard round, and keep the tiles(like word tiles) that have a high degree of safety. If someone declares riichi later, you can remain in a safe state and reduce dealing in to the minimum. This method also protects you from dealing in to the damaten of other players.

Normally, a sanshanten hand in the 6th discard round and a ryanshanten hand in the 12th discard round has zero chance of winning. With this sort of tiles, you can either call tiles and try to win or go into betaori. Just like in poker, it's not possible to have a good hand every single round. Attempting to win when you have a bad hand will only cause you to incur more losses.

The two theories originate from the principle below:

Discard the dangerous tile before someone reaches tenpai.

Discard safe tiles sequentially after someone reaches tenpai.

This is the true essence of reducing the chances of dealing in.

# Epilogue

Well, that's it. If you read all this, I hope you have enjoyed the articles as much as I had. And if you learned a thing or two, even better.

As "Hongyi" has not updated his blog in a while now, it may be a while until this documents needs updating - if at all.

Feel free to distribute this pdf to whomever you think might be interested.

Speaking of, you might want to pay a visit to these:

A [wait quiz](#)<sup>1</sup> (basically a betaori drill, based on tenhou's game logs).

And a [scoring drill](#)<sup>2</sup> (useless unless you know how to count fu/han).

And if these do not interest you, there is always [Tenhou](#)<sup>3</sup>.

(If you need help with it, there's a great [Documentation](#)<sup>4</sup> online.)

If there is an issue with the document, if it needs updating or correcting, mail me:  
mahjong1291@outlook.com

And finally, I'll shut up and end the document.

Cheers,

User1291.

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<sup>1</sup><http://waitquiz.nfshost.com/>

<sup>2</sup><http://waitquiz.nfshost.com/calcquiz.html>

<sup>3</sup><http://tenhou.net/0/>

<sup>4</sup><http://arcturus.su/tenhou/>

# Glossary

**aka dora** the red fives that form a special kind of dora in Japanese mahjong.

**ankan** A closed kan. Note, that when you're riichi, you can only declare the kan if it does not change the tiles you are waiting on.

**betaori** A strategy that focuses entirely on avoiding dealing into opponents' hands, with no intention of advancing one's own hand.

**chanta** Short for "chantaiyao". A yaku where every mentsu must contain at least one yaochuhai. Hand must have at least one shuntsu 123 or 789.

**chi** claiming a discard for a sequence.

**chinitsu** A yaku. "Full Straight", meaning only tiles of one suit and no dragons/winds.

**chitoitsu** A yaku. Literally meaning "seven pairs", it's one of the only two valid winning hands in Japanese mahjong that violate the 4mentsu + 1jantou requirement. (the other one being the yakuman Kokushi Musou).

**chunchan** The tiles numbered 2-8. Sometimes called "tanyao".

**damaten** tenpai without calling riichi.

**dora soba** the tiles near the dora.

**furiten** To be Tenpai and waiting on a tile that you have already discarded. In such a situation, you can only win by tsumo.

**genbutsu** A 100% safe tile.

**guest wind** A wind (East, South, West, North) that is neither the round wind nor your seat wind.

**gyakuten** turn-around.

**han** Handpoints. Each dora adds one, and yaku add 1-6, depending on their complexity. Having 1Han does not make you eligible to win, though. For that you need at least one yaku too.

**hanchan** half a game, consisting of 4 east and 4 south rounds.

**honitsu** A yaku. "Half Straight", meaning only tiles of one suit and dragons/winds.

**iipeikou** A yaku. Two equal sequences(e.g. 445566) of the same suit (e.g. manzu).

**ippatsu** When a player declares riichi and then receives the winning tile within one round of play, or before the round is interrupted by call.

**itsuu** Also called "Ikkitsukan". A yaku consisting of three shuntsu of the same suit.

**jantou** the pair of a completed hand.

**kabe** A tile-counting technique that measures the possibility of someone making shuntsu based on how many instances of a tile are visible.

**kamicha** The player seated to your left.

**kan** forming four-of-a-kind, either by claiming a discard or by drawing all four tiles.

**kanchan** waiting on the middle tile of a shuntsu (e.g. 46 waiting on 5).

**kantsu** A mentsu consisting of four equal tiles. You can either call a discard for it or declare it when drawing the fourth tile. If you already pon-ed a koutsu and you draw the fourth tile, you can "upgrade" your koutsu by declaring the kan. If you declare the kan, you draw a tile from the dead wall and flip an additional dora indicator. If four kantsu are declared, the round ends in a draw unless they were all declared by the same player, who in that case wins a yakuman.

**kokushi musou** A yakuman. English name: "13 Orphans" only valid hand other than chitoitsu that violates the 4 mentsu + 1 jantou requirement. Consists of one tile of each 1, 9, dragon and one double forming a jantou. It's valued a double yakuman if the final wait is on the jantou.

**koutsu** A mentsu consisting of three equal tiles.

**mentsu** a completed set of three or four tiles, either a sequence or three-of-a-kind or four-of-a-kind.

**menzen** closed hand.

**MFC** Mahjong Fight Club, a computer game.

**nancha** The player seated South.

**nomi** nomi is a japanese suffix meaning "only" or "nothing but". In mahjong context, it is often used with yaku. E.g. "pinfu-nomi" means that pinfu is the only yaku you have.

**noten bappu** The penalty you have to pay for not being tenpai when a round ends in a ryuukyoku.

**oya** The one currently seated east and the one discarding first. In English mahjong terminology often called "dealer". Non-Oya players are called "Ko". The first Oya in a game is also called the chiicha (Trivia: Oya translates to "parent", Ko to "child").

**peicha** The player seated North.

**penchan** waiting on 3 to complete 123 or waiting on 7 to complete 789.

**pinfu** A yaku. The hand must be closed and consists of only shuntsu (no koutsu) and a jantou valued 0 points (no dragons/round or seat winds). Also, your final wait must be open (on at least two different tiles).

**pon** claiming a discard for three-of-a-kind.

**ron** Calling an other player's discard for a win.

**routouhai** The tiles numbered 1 and 9.

**ryanmen** A two-sided wait, e.g. 56 waiting on 4 or 7.

**ryuukyoku** A drawn game.

**sanshoku** A yaku. A hand containing the same shuntsu in each of the three suits (e.g. 345wan 345pin 345sou).

**shaacha** The Player seated West.

**shanpon** A wait consisting of two pairs.

**shanten** Number of tiles needed to reach tenpai. Usually prefixed with the number (iishanten = "1-away from tenpai", ryanshanten = "2-aft", sanshanten = "3-aft", suushanten = "4-aft", uushanten = "5-aft").

**shimocha** The player seated to your right.

**shuntsu** a valid sequence consisting of three tiles.

**suji** "pai" meaning "tile", the "suji-pai" are tiles that complete Ryanmen waits.

**suuankou** A yakuman. Three concealed three-of-a-kinds. Worth double yakuman if you wait on a single tile for the jantou.

**taatsu** A tile pattern that can be turned into a shuntsu with one more tile. eg 46 can be completed with a 5.

**takame** The specific tile(s) in a multiple wait that gives you the most points.

**tanki** A wait on a single tile to complete the pair (the jantou).

**tenhou** A free to play online mahjong: <http://tenhou.net/0/>.

**tenpai** a "ready" hand, meaning one needing only one last tile.

**tesuji** Either means a standard method or - especially in a go/shogi context - an apt move. As either could fit here, I'll mention both.

**toimen** The player seated across the table..

**toitai** A yaku, where your hand consists of 4 koutsu + 1 jantou and no shuntsu.

**toitsu** A pair of identical tiles.

**toncha** the player seated east (see "Oya").

**tonpuusen** quart a game, consisting of 4 east rounds.

**tsumo** Drawing the last tile you need yourself.

**tsuupai** The word tiles, meaning Winds and Dragons. Sometimes called jihai instead..

**ura-dora** lit."bottom dora". When you declare "riichi" and then win the hand, you are allowed to count the tiles below the dora pointers (bonus tile pointers) as additional dora pointers.

**yaku** a certain combination of tiles yielding handpoints. You need at least one yaku, e.g. Pinfu ("All Simples").

**yakuhai** Dragons, Round and Seat Winds.

**yakuman** Limit hand that yields maximum amount of points (48'000 / 32'000) for forming one of several especially hard tile combinations.

**yaochuhai** The tiles numbered 1 and 9 (routouhai) plus the word tiles (tsuupai).

**yasume** The specific tile(s) in a multiple wait that gives you the least points.