

# An Introduction to Sheng Ji (升级)/Tractor (拖拉机)

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## 1 Introduction

This document introduces the Chinese card game Sheng Ji (升级) using English vocabulary but including the Chinese names of various concepts. Because Sheng Ji has many regional variants, there are numerous rules that are not standardized. This document aims to identify some of these rules and provide one possible set of rules for playing the game, noting variants where appropriate. It also aims to be as thorough as possible to avoid ambiguities. The intended audience is anyone and everyone with an interest in playing the game, whether novice or expert, Chinese speaker or not.<sup>1</sup>

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<sup>1</sup>I originally wrote this guide in my junior year of college while organizing Sheng Ji game nights at the Colonial Club of Princeton University, and I am grateful to my fellow members for indulging me in many games over the years. Please send all comments and corrections to me at [ben@ben-zhang.com](mailto:ben@ben-zhang.com). I apologize in advance for any errors, omissions, or flagrant misuse of Chinese characters.

## 2 Background

The card game Sheng Ji (升级) is played in China and many Chinese immigrant communities. In recent years, the younger generations have learned the game from their parents and spread it to many of their comrades on college campuses.

The name “Sheng Ji (升级)” actually refers to a family of closely-related card games.

- **Si Shi Fen (四十分)** (literally, “Forty Points”) is played with one deck and four people in fixed partnerships. Other names include:
  - **Da Bai Fen (打百分)** (literally, “Contesting a Hundred Points”)
- **Sheng Ji (升级)** (literally, “Advance Level” or “Promote Level”) is played with two decks and four people in fixed partnerships. Other names include:
  - **Tuo La Ji (拖拉机)** (literally, “**Tractor**”, itself a common English name for the game)
  - **Ba Shi Fen (八十分)** (literally, “Eighty Points”)
- **Zhao Peng You (找朋友)** (literally, “Finding Friends”) is played with teams that change from hand to hand, usually with multiple decks and more than four people.

This document will focus on the most common variant, henceforth “Sheng Ji,” which is played with two decks and four players in fixed partnerships. Readers will find the rules of play in Section 3 and some basic strategy tips in Section 5. Many of the tedious details on playing tricks are contained in Section 4, included for completeness. Section 6 describes several rule variants, including Si Shi Fen and Zhao Peng You, though it is by no means exhaustive.

## 3 Rules of Play

### 3.1 Summary

Sheng Ji is a trick-taking card game played with four players and two decks of 54 cards each, Jokers included. The players are divided into two teams of two, with teammates sitting across the table from each other, so that the order of play alternates between the teams. Players may not communicate or consult each other about their hands during play. One team is denoted the **Declarers (庄家)** (also known as Defenders), and the other team is denoted the **Opponents (副家)** (also known as Attackers). The **Dealer (当庄)** is one of the two players on the Declarer team. The game involves both a **trump rank** (one of the card ranks from 2 through Ace) and a **trump suit** (one of clubs, diamonds, hearts, or spades). Cards of either the trump rank or the trump suit (**主牌**) outrank other cards (**副牌**), so they are nice to have. The Declarer/Dealer/Opponent labels, trump rank, and trump suit change with each hand, but the members of each team do not.

## 3.2 Objective

The objective of the game is to advance past level Ace (hence the name Sheng Ji (升级), literally “advance level”). Each team has a **level**, and teammates advance levels together. The levels follow the usual card ranks in a 54-card deck: 2-3-4-5-6-7-8-9-10-J-Q-K-A from low to high. Teams advance levels after a hand if they have taken tricks containing enough point cards to clear certain point thresholds, as explained later in Section 3.8.

## 3.3 Card Rankings and Points

The Kings, 10s, and 5s are **point cards** (分牌). Kings and 10s are worth 10 points each, and 5s are worth 5 points each, for a total of 200 points in the 108-card deck. The primary focus of gameplay is to win tricks that contain these point cards.

The ranking of cards and their count within the deck is as follows, from high to low:

1. Big (colored) Joker (大鬼/大王) (2)
2. Small (black) Joker (小鬼/小王) (2)
3. Cards of the trump rank and trump suit (2)
4. Cards of the trump rank whose original suit is not the trump suit (6), all equal. These are temporarily part of the trump suit for the hand.<sup>2</sup>
5. Cards in the trump suit but not trump rank (24), ordered from Ace to 2
6. Cards of neither the trump suit nor the trump rank (副牌) (24 per suit = 72), ordered from Ace to 2 within each suit (but not comparable between suits)

Cards of types 1-5 are all considered part of the **trump suit** (主牌), for a total of 36 trumps. If there is **no trump suit** (无主), only cards of types 1-4 are part of the trump suit (i.e., only Jokers and the trump rank, for a total of 12 trumps), and types 3 and 4 are necessarily equivalent as there is no distinction among the suits.

As an example, suppose that the trump rank is 8 and the trump suit is hearts (♥). The ranking of cards is then:

1. Big Joker
2. Small Joker
3. 8♥
4. 8♣, 8♦, 8♠ (all equal)
5. A♥ - K♥ ... - 9♥ - 7♥ - ... - 2♥, in this order

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<sup>2</sup>Some variants consider all 2s “original trumps” (元主), always part of the trump suit as another trump rank. They are added here between the actual trump rank and the rest of the trump suit, with the 2 in the trump suit ranking higher than the other 2s.

6. A - K - ... - 9 - 7 - ... - 2 in ♣, ♦, and ♠. The 8s have been moved to the trump suit. None of these three suits outrank each other, but there is an ordering within each suit.

### 3.4 Setup

At the start of the game, each team starts at an initial level which is set as desired. A full game starts with both teams at level 2.

**A common variant** starts the game at 8 (or another number higher than 2) to reduce the number of hands required to advance past level Ace and win. Since each hand can take upwards of 15 minutes and a full game requires dozens of hands, higher initial levels reduce the time required to finish the game.

### 3.5 Starting the First Hand

#### 3.5.1 Determining the Trump Rank

For the very first hand of a game, the Declarer, Dealer, and Opponent labels will be assigned during the deal, and the trump rank is set to the initial level.

#### 3.5.2 Shuffle

One player thoroughly shuffles two decks of standard playing cards, including the Jokers.

#### 3.5.3 Determining the First Player to Draw

The first player to draw is assigned randomly. One possible algorithm is as follows:

The person who shuffled lifts a contiguous range of cards from the top of the deck, looks at the card at the bottom of the cards lifted, and puts the cards back on the deck. Denoting  $n$  as the rank of the revealed card, the shuffler then counts  $n$  players counterclockwise, starting with themselves as 1, and this player is the first to draw a card. For the purposes of determining the first player to draw, Jack is considered 11, Queen 12, and King 13. If an Ace or a Joker is revealed, the cards should be replaced and another card revealed. (Thus, the shuffler draws first if a 5, 9, or King (13) is revealed.)

#### 3.5.4 Drawing

The player to the left of the first player to draw cuts the deck, and the first player to draw begins the draw by drawing a card and not showing it to any other player. The players take turns drawing a card in counter-clockwise order until *all but 8 cards* have been drawn (so the number of cards in each hand is 25). Players should sort their cards by suit, taking care to sort all trumps together. For example, if 8s and hearts are trumps, then 8♣, 8♦, 8♠, and Jokers should be sorted together with the rest of the hearts.

### 3.5.5 Determining Declarers, Dealer, and the Trump Suit

During the first draw of the game, any player may become the Dealer (抢庄) and thus seize the Declarer label for their team by throwing onto the table either (a) one card of the trump rank, (b) two identical cards of the trump rank, or (c) a pair of identical Jokers. The suit of the card(s) thrown is **declared** (亮牌, 叫主) as the trump suit for the hand, with no trump suit (only the trump rank and Jokers are trump cards) in the case of a pair of identical Jokers. (One Joker by itself cannot declare no trump suit.) If option (a) is used, the player may later **reinforce** their declaration, by throwing down the only other card in the deck that matches both in suit and in rank (thus transforming into option (b)), *before* another player overrides as described below.

After one player makes an initial declaration, other players may **override** by throwing down a pair of two identical cards higher than what the previous overriding or declaring player threw down. The last player to declare or override becomes the Dealer. From high to low, the possible throws are:

1. A pair of big Jokers, which declares no trump suit (trump rank and Jokers only)
2. A pair of small Jokers, which declares no trump suit (trump rank and Jokers only)
3. A pair of identical cards of the trump rank, which declares that suit as trump. This declaration can only override a single card of the trump rank that has not been reinforced, and cannot override another pair of cards of the trump rank.

No player may directly override themselves. Therefore, the original declarer may not change their original suit declaration by declaring two identical cards of the trump rank in another suit. The original declarer can override with Jokers only if another player has overridden them with two identical cards of the trump rank.

**A common variant** allows *late reinforcement*. During the draw, this rule change allows the initial declarer to reinforce their original declaration *immediately after* it is overridden by another player with a pair of identical cards of the trump rank. (Normally, reinforcement of a suit declaration is only allowed *before* another player overrides.) Because Jokers are higher than a pair of the trump rank, late reinforcement cannot prevent an override by Jokers. This rule makes declaring more advantageous, as one has the option to keep one's initial declaration or accept the new suit if overridden.

Declaring and reinforcing are never required, and may be done at any time during the deal. However, it is advantageous to be the Declarer team, so on the first hand of the game, the first person to draw a card of the trump rank (or a pair of identical Jokers) should declare it immediately, reinforcing with the second copy of the card if they draw it later.

If **no player declares a trump suit or no trump suit during the draw**, the trump suit is set to the suit of a card from the last 8 cards of the deck. One possible algorithm is as follows:

After a brief pause following the draw, declarations are no longer allowed. Then the remaining 8 cards are turned face-up one-by-one until a card of the trump rank is revealed, and the

suit of this card is set as the trump suit. If no card in the bottom 8 cards is of the trump rank, then the suit of the highest-ranking card becomes trump. Here, rank is determined only via the usual ordering Ace, King, ... 3, 2; Jokers are excluded. If multiple cards are tied for the highest rank, the first one takes precedence. (Note that this algorithm will sometimes require the Dealer to reveal all 8 of the bottom cards, which is disadvantageous for the Dealer.)

### 3.5.6 Kitty

The last 8 cards of the deck are given to the Dealer, without showing the other players. The Dealer adds these 8 cards to their hand and discards any 8 cards from their hand. These discarded cards are denoted the **kitty** (底牌) and are set aside for the duration of the hand. It is important not to mix these up with discarded cards during play. Point cards put in the kitty are subject to special rules regarding scoring at the end of the hand; see Section 3.8. It is generally acceptable for the Dealer to look through their kitty at any point during the hand.

### 3.5.7 Variant: Re-deals

**A common variant** allows a re-deal if a player has no trumps or less than a specified number of points in their hand (usually 10 or 5). Simply repeat the deal process starting with the shuffle. Under some rules, a different player starts the re-deal, and the Dealer role may be up for grabs during the re-deal, captured by whoever declares or overrides last.

## 3.6 Starting Subsequent Hands

### 3.6.1 Determining the Declarers, Dealer, and Trump Rank

For every hand after the first, the Declarer label is assigned to the team who won the previous hand. If the Declarers in the previous hand won the previous hand, the Dealer role passes to the Dealer's partner and the Declarers remain Declarers; otherwise, the Dealer role passes to the player on the Dealer's immediate right (i.e., in a counter-clockwise direction) and the Declarers and Opponents switch labels. The trump rank is set to the Declarers' level.

### 3.6.2 Shuffle

One player thoroughly shuffles two decks of standard playing cards, including the Jokers.

### 3.6.3 Determining the First Player to Draw

The Dealer is the first player to draw.

### 3.6.4 Drawing

In subsequent hands of the game, the player to the left of the Dealer cuts the deck, and the Dealer begins the draw by drawing a card. Drawing then proceeds as in the first hand of the game, leaving an 8-card kitty and sorting hands appropriately. See Section 3.5.4.

### 3.6.5 Declaring the Trump Suit

In subsequent hands of the game, declaring the trump suit is done by the same procedure as in the first hand of the game; see Section 3.5.5. However, the provisions relating to the Dealer position do not apply, because the Dealer in subsequent hands is already determined according to Section 3.6.1 before the draw starts.

### 3.6.6 Kitty

In subsequent hands of the game, setting the kitty is done by the same procedure as in the first hand of the game; see Section 3.5.6.

### 3.6.7 Variant: Re-deals

This rule variant is also possible in subsequent hands. See Section 3.5.7.

## 3.7 Playing Tricks

Play revolves around playing tricks. A **trick** is one rotation of play in which each player takes one turn in counterclockwise order to play one or more cards. In each trick, every player plays the same number of cards.

### 3.7.1 Leading

The Dealer starts the first trick. In subsequent tricks, the winner of the previous trick leads. Every lead must contain cards of exactly one suit. Valid leads are as follows:

- Any **single card** (单张)
- Any **pair** (对子), defined as identical cards (which match in both suit and rank). “Identical” is key: for example, when 8 is the trump rank and spades are the trump suit,  $8\clubsuit-8\spadesuit$  is not a pair because they are not identical cards, even though they are both trump cards and rank equally.
- Any set of **consecutive pairs** (“tractors” (拖拉机)), defined in Section 4.1.
- Any **combination of highest units in the same suit** (“throw” (甩牌)), defined in Section 4.2. Other players must verify that throws are legal. Penalties for invalid combination leads are covered in Section 3.7.5.

### 3.7.2 Following

After the first player leads, the following players, in counterclockwise order, must each play the same number of cards as the leader did, subject to these rules:

1. If possible, players must follow **suit and structure** to the extent possible (singles follow singles, pairs follow pairs, consecutive pairs follow consecutive pairs, and so on).
2. Otherwise, players must follow **suit** to the extent possible, adding cards of other suits if necessary to match the number of cards played. (Remember that all cards of the trump rank are part of the trump suit, not their original suits as marked on the cards.)
3. Otherwise, players may play any cards they wish. If the lead was not in the trump suit, and a following player has no cards of (“**is void in (絶)**”) the suit led, then they may “**trump**” by playing a set of trump cards that match the structure of the cards led. Such a play outranks the lead.

Full details are given in Section 4.3.

### 3.7.3 Winning Tricks

The highest set of cards that match the structure of the leading cards will win the trick, with sets of cards entirely in the trump suit outranking (“**trumping**”) sets in the suit led. A set of cards from multiple suits automatically loses the trick; therefore, a player can win the trick only if they play cards entirely in one suit: either the suit led or the trump suit. Ties are won by the earliest player.

Full details are given in Section 4.4.

### 3.7.4 Taking Points

Any point cards (Kings, 10s, 5s) played during the trick are taken by the team of the player who wins the trick, and all other cards are discarded face-down. If the Declarers take the points, the point cards are also discarded. If the Opponents take the points, the point cards are kept face-up in front of a player on the Opponent team. It is generally acceptable to check the discard pile to look at the previous trick only.

### 3.7.5 Illegal Plays

Any **illegal play**, such as not following suit or structure, must be immediately retracted and corrected during the current trick. If an error is not discovered until later, the offending player and their teammate automatically lose the hand.

**If needed** to deter abuse of this rule (for example, a player exposing cards illegally to communicate to one’s partner, or purposely making an illegal play with a bad hand to lock in a loss by a small margin), consider adding an additional penalty involving points or demotion of levels.



Additional penalties apply for **invalid combinations of highest units in a suit** (see Section 4.2 for an example). When a player leads a combination of highest units in a suit, the other players (including the leader's partner) must, in turn, affirm that the combination is valid and that they do not hold higher units. If the lead is invalid, the other player(s) show(s) their higher combination(s), and the leader must retract the play and lead the weakest unit in the combination that can be beat:

- the lowest **single** in the combination if there is a higher single in the suit currently held by another player;
- if the combination has no singles that can be beat, then the lowest **pair** in the combination if there is a higher pair in the suit currently held by another player;
- if the combination has no pairs that can be beat, then the lowest **consecutive pairs** (of length 2, then length 3, and so on) in the combination if there are higher consecutive pairs currently held by another player.

The player who holds the higher single, pair, or consecutive pairs in the suit is not required to play it on this trick.

**A common variant** adds a point penalty to a player who leads an invalid combination of highest units in a suit. The amount of the penalty is usually a flat 10 points, or alternatively 10 points per invalid unit (a single, pair, or consecutive pairs that can be beat within the suit), per invalid card, or per card withdrawn. This point penalty is in addition to the requirement for the offending player to lead the weakest unit that can be beat.

### 3.8 Ending the Hand and Scoring

The hand ends when the last trick is played. All players will deplete their hands at the same time.

The Opponents calculate the number of points that they won over all the tricks in the hand by adding the values of the face-up point cards captured during the hand. (Recall that Kings and 10s are worth 10 points, and 5s are worth 5 points.) If the **Declarers win the last trick** (保底), then the point total stands. However, if the **Opponents win the last trick** (抠底), they take the cards in the kitty, compute the total number of points in the kitty, multiply this sum by a **bonus factor**, and add this product to their point total. The bonus factor is equal to  $2^{n+1}$ , where  $n$  is the number of pairs in the largest unit (single, pair, or consecutive pairs) played on the last trick.<sup>3</sup> (This unit may be part of a combination of highest singles and (consecutive) pairs in a suit, if that is the lead on the last trick.) The bonus factor for different leads on the last trick is therefore as follows:

- Single: 2
- Pair: 4
- Two consecutive pairs: 8

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<sup>3</sup>Other common variants of this rule use  $2n$  or  $2^n$  where  $n$  is the number of *cards* in the largest unit.

- Three consecutive pairs: 16
- and so on, doubling for each additional consecutive pair

After computing this point total, the level of at most one team is adjusted according to the following table. Opponents need to reach a threshold of **80 points** out of a pre-bonus total of 200 to **win the hand** and gain Declarer status for the next hand; otherwise, the Declarers win the hand.

If Opponents take __ points:	Then:	And:
0	Declarers advance +3 levels	Declarers remain Declarers
5–35	Declarers advance +2 levels	Declarers remain Declarers
40–75	Declarers advance +1 level	Declarers remain Declarers
80–115	No level change	Opponents become Declarers
120–155	Opponents advance +1 level	Opponents become Declarers
160–195	Opponents advance +2 levels	Opponents become Declarers
200–235	Opponents advance +3 levels	Opponents become Declarers
...	...	...
$[80 + 40n, 80 + 40(n + 1) - 5]$ $n \in \{0, 1, 2, \dots\}$	Opponents advance $n$ levels	Opponents become Declarers

Point totals above 200 are possible if the Opponents gain extra points through a kitty bonus.<sup>4</sup>

### 3.9 Win Condition

Players continue to play hands and advance levels until one team wins. The win condition requires a team to win a hand in which Ace is the trump rank *and they are the Declarers*. This last condition prohibits a team from winning a game by “skipping” past Ace if they win a hand by a large margin as Opponents. See Section 6.1.2.

## 4 Further Details on Tricks

### 4.1 Valid Leads: Consecutive Pairs (Tractors)

Consecutive pairs (tractors) are defined as a set of two or more pairs such that the pairs are of adjacent and distinct rank. For example, let the trump rank be 8 and the trump suit be hearts (♥). The following examples are consecutive pairs:

- 4♣-4♠-5♣-5♠

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<sup>4</sup>As an extreme example, assume that a player on the Opponent team draws a hand so good that they win the first trick and play the remaining 24 cards of their hand on the second trick as 12 consecutive pairs. Assume further that the Dealer puts 80 points in the kitty. Then the Opponents could theoretically take  $200 - 80 = 120$  points from the cards in players’ hands and  $80 * (2^{13}) = 655,360$  points from the kitty, for a total of 655,480 points. They would then advance  $\lfloor \frac{655480 - 80}{40} \rfloor = 16,385$  levels, certainly enough to get to level Ace (which cannot be skipped!).

- $7\spadesuit-7\spadesuit-9\spadesuit-9\spadesuit$  (since  $8\spadesuit$  is in the trump suit, not spades, making 7 and 9 adjacent)
- $10\heartsuit-10\heartsuit-J\heartsuit-J\heartsuit-Q\heartsuit-Q\heartsuit$
- $7\heartsuit-7\heartsuit-9\heartsuit-9\heartsuit$  (since  $8\heartsuit$  ranks above all other hearts and is not adjacent to  $7\heartsuit$  or  $9\heartsuit$ )
- $A\heartsuit-A\heartsuit-8\clubsuit-8\clubsuit$  (since  $8\clubsuit$  is also in the trump suit)
- $8\clubsuit-8\clubsuit-8\heartsuit-8\heartsuit$  (the  $8\heartsuit$  is strictly higher than  $8\clubsuit$ )
- $8\heartsuit-8\heartsuit$ -Small Joker-Small Joker
- Small Joker-Small Joker-Big Joker-Big Joker
- $A\heartsuit-A\heartsuit-8\clubsuit-8\clubsuit-8\heartsuit-8\heartsuit$ -Small Joker-Small Joker-Big Joker-Big Joker

The following examples are NOT consecutive pairs:

- $A\diamond-A\diamond-2\heartsuit-2\heartsuit$  (since the pairs are of different suits, even though the ranks could be considered “adjacent” as  $2\heartsuit$  is the lowest card in the trump suit)
- $7\spadesuit-7\spadesuit-8\spadesuit-8\spadesuit$  (since  $8\spadesuit$  is in the trump suit, not spades)
- $7\heartsuit-7\heartsuit-8\heartsuit-8\heartsuit$  (since  $8\heartsuit$  ranks above all other hearts and is not adjacent to  $7\heartsuit$ )
- $8\clubsuit-8\clubsuit-8\diamond-8\diamond$  (since the pairs are of the same rank, not distinct ranks)<sup>5</sup>

## 4.2 Valid Leads: Combinations of Highest Units (“Throws”)

A combination of highest units (singles, pairs, or consecutive pairs) in the same suit (a “**throw**”) is a valid lead as long as no remaining singles in the suit are strictly higher than any single in the throw, no remaining pairs in the suit are strictly higher than any non-consecutive pairs in the throw, and no remaining consecutive pairs of length  $n$  in the suit are strictly higher than any consecutive pairs of length  $n$  in the throw for each  $n \geq 2$  (e.g., three consecutive pairs may be part of a valid combination even if another player holds two consecutive pairs of higher rank within the suit). Note that cards “remain” in the suit only if they are in players’ hands—cards that have already been played, or that the Dealer placed in the kitty, are not considered to “remain.”

The following examples are valid combinations (assume spades are not trump):

- $A\spadesuit-K\spadesuit-K\spadesuit$  is always valid. There is no single spade *strictly* higher than Ace, and no remaining pair of spades higher than King, because one of the two  $A\spadesuit$  is already in the combination.

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<sup>5</sup>In some variants, “consecutive pairs” are defined as a set of pairs such that there are no other cards strictly in between the highest and lowest rank of the set. Under this definition, the last example of consecutive pairs above would not be consecutive pairs, because the  $8\diamond$  and the  $8\spadesuit$  are not included, but the last example of non-consecutive pairs above would actually be consecutive pairs, since there are no cards strictly in between the  $8\clubsuit$  and  $8\diamond$  (the  $8\spadesuit$  is not *strictly* in between). Such consecutive pairs of the trump rank but not marked on the cards as the trump suit are equivalent to each other; ties are won by the earliest played.

- Suppose an A♠ and a K♠ have already been played. Then A♠-K♠-Q♠ is valid, because there is no remaining A♠ or K♠ to outrank the Q♠.
- Suppose an A♠ and a Q♠ have already been played. Then A♠-K♠-J♠-J♠ is valid, because the A♠ is always the highest single spade, there is no remaining A♠ to outrank the K♠, and there are no remaining pairs of spades higher than Jacks.

The following example is NOT a valid combination. Suppose spades are not trump, and a player leads the combination K♠-Q♠-10♠-10♠, but one A♠ and the J♠-J♠ pair are still held by other players. In this case, the K♠ and Q♠ singles can be beat by the higher A♠ single held by another player, and the 10♠-10♠ pair can be beat by the J♠-J♠ pair held by another player, so all three units of the combination can be beat. According to Section 3.7.5, the initial player is obligated to lead the Q♠, which is the weakest unit in the combination that can be beat. (Even though J♠ is a lower rank, pairs are stronger than singles.)

### 4.3 Valid Follows

After the first player leads, the following players, in counterclockwise order, must each play the same number of cards as the leader did, subject to these rules:

1. If possible, players must follow **suit and structure** to the extent possible. Singles follow singles, pairs follow pairs, and consecutive pairs of the same length follow consecutive pairs of a given length. Multiple pairs in a lead must be followed by the same number of pairs to the extent possible. A lead of  $n$  consecutive pairs must be followed by  $n$  consecutive pairs from each player if possible, otherwise  $n - 1$  consecutive pairs, and so on. Longer sets of consecutive pairs in other players' hands are not “protected” if the leader leads a shorter set of consecutive pairs or even a single pair—a subset of the consecutive pairs must be played if there are no other pairs available in the hand to play.<sup>6</sup>
2. Otherwise, players must follow **suit** to the extent possible, adding cards of other suits if necessary to match the number of cards played. Note that a player is never obligated to play pairs in suits other than the suit led by the leader.
3. Otherwise, players may play any cards they wish. If the lead was not in the trump suit, and a following player has no cards in the suit led, then they may “**trump**” by playing a set of trump cards that match the structure of the cards led. Such a play outranks the lead.

The specific implications of these rules are given below for various possible leads from the leader:

- If the leader plays a **single card** from a suit, then the following players must each play:
  1. *Suit*: A single card in the suit led, if possible.
  2. Otherwise, any other card.

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<sup>6</sup>Hence the name of the game: tractors “pull out” other tractors, non-consecutive pairs, and singles.

- If the leader plays a **pair**, then the following players must each play:
  1. *Suit + structure*: A pair in the suit led, if possible.
  2. *Suit*: Otherwise, two cards in the suit led, if possible.
  3. *Suit*: Otherwise, one card in the suit led and any other card, if possible.
  4. Otherwise, any two cards from another suit (not necessarily a pair).
  
- If the leader plays **two consecutive pairs**, then the following players must each play:
  1. *Suit + structure*: Two consecutive pairs in the suit led, if possible.
  2. *Suit + structure*: Otherwise, two pairs in the suit led, if possible.
  3. *Suit + structure*: Otherwise, a pair and two singles in the suit led, if possible.
  4. *Suit*: Otherwise, four cards in the suit led, if possible.
  5. *Suit*: Otherwise, three cards in the suit led and any other card, if possible.
  6. *Suit*: Otherwise, two cards in the suit led and any two other cards, if possible.
  7. *Suit*: Otherwise, one card in the suit led and any three other cards, if possible.
  8. Otherwise, any four cards from other suits.
  
- More generally, if the leader plays a **combination of highest singles, pairs, and consecutive pairs (of any length) in the same suit**, then the following players must each play:
  1. *Suit + structure*: The same number of singles, pairs, and consecutive pairs of corresponding lengths in the suit led, if possible.
  2. *Suit + structure*: As many sets of consecutive pairs as possible in the suit led, matching lengths as much as possible, up to the total number of sets of consecutive pairs in the combination led;
    - PLUS as many pairs as possible in the suit led, up to the point where the total number of consecutive and non-consecutive pairs matches the total number of consecutive and non-consecutive pairs in the combination led;
    - PLUS as many singles as possible in the suit led, up to the point where the total number of cards matches the total number of cards in the combination led.
    - If needed, add in any cards from other suits such that the total number of cards matches the total number of cards in the combination led.

For example, suppose spades are not trump and the leader leads a valid 5-card combination of highest spades  $4\spadesuit-4\spadesuit-5\spadesuit-5\spadesuit-A\spadesuit$  consisting of a tractor and a single card, so no higher tractors or singles exist in spades. A following player must play a tractor in spades plus a fifth spade card. If they do not have any tractors in spades, then they must play two non-consecutive pairs in spades (even if they are of higher ranks such as  $10\spadesuit-10\spadesuit-K\spadesuit-K\spadesuit$ ) plus a fifth spade card, because they must attempt to match the total number of pairs (2) in the

original combination in spades (suit + structure). (Unfortunately, higher non-consecutive pairs cannot win because consecutive pairs can only be beat by higher consecutive pairs or trump consecutive pairs.) If the player does not have two non-consecutive pairs in spades, then they must play one pair and three singles in spades, or if this is not possible, then five singles in spades. If the player has fewer than five spades, then they must play all of them and add cards from other suits to play a total of five cards on this trick.

#### 4.4 Winning Tricks

The highest set of cards that match the structure of the leading cards will win the trick, with sets of cards entirely in the trump suit outranking (“trumping”) sets in the suit led. Ties are won by the earliest player.

Specific examples follow:

- If the leader played a single card, then the highest trump card will win. If there were no trumps played, the highest card in the suit led will win. If there is a tie for highest card, the first player to play the highest card wins.
- If the leader played a pair, then the highest trump pair will win. If there were no trump pairs played, then the highest pair in the suit led will win. If there is a tie for highest pair (only possible with cards of the trump rank), the first player to play the highest pair wins. Note that two single cards that do not form a pair cannot win the trick, even if they are trumps.
- If the leader played consecutive pairs, then the highest consecutive pairs of the same length in the trump suit will win. If there were no such consecutive pairs played, then the highest consecutive pairs of the same length in the suit led will win. Note that singles and non-consecutive pairs cannot win the trick, even if they are trumps.
- If the leader played a combination of highest units in a suit, then of all the sets of trumps played that *match* the structure of the leading combination, the *highest* set wins. If such a matching set of trumps was not played, then the leader will necessarily win, since by definition there cannot be a higher combination in the suit led that outranks the leader’s combination.
  - A trump combination “matches” the structure of the leading combination if (1) it contains the same number of total cards, (2) it contains at least the same number of total pairs as the leading combination, and (3) its pairs may be matched up with those of the leading combination such that for each  $n \geq 2$ , the trump combination contains at least as many sets of length- $n$  consecutive pairs as the original combination. The “at least” qualifier allows a pair to trump two single cards and two consecutive pairs to trump two non-consecutive pairs or four singles. For example, if hearts are trump, the consecutive pairs + single  $2\heartsuit-2\heartsuit-3\heartsuit-3\heartsuit-7\heartsuit$  match a lead of two pairs + single  $9\spadesuit-9\spadesuit-Q\spadesuit-Q\spadesuit-A\spadesuit$ .
  - “Highest” is determined by identifying the longest unit in the original leading combination and comparing the highest corresponding unit in each of the trumping combinations. This

could be a single, a pair, two consecutive pairs, three consecutive pairs, and so on. **Note that this unit must be present in the leading combination.** For example, if the leading combination has no pairs, then any pairs in the trump combinations are disregarded—the cards are all treated as single cards, so the trump combination with the highest individual card (which may be part of a pair) wins. In the example above, the leading combination has only non-consecutive pairs, so the relevant unit of the trumping combination is the pair  $3\heartsuit-3\heartsuit$ , not the consecutive pairs. It would lose to the combination  $5\heartsuit-5\heartsuit-9\heartsuit-9\heartsuit-4\heartsuit$  (with no consecutive pairs but a higher relevant unit  $9\heartsuit-9\heartsuit$ ). Ties are broken in favor of the earliest player, disregarding the other cards in the combination—there are no “kickers” in Sheng Ji.<sup>7</sup>

## 5 Basic Strategy

- **Declaring trumps:** During the draw, a player should declare the trump suit by throwing down a card of the trump rank if they have already drawn many cards and pairs in the suit, as it is good to have many trump cards. This general rule may be adjusted for various factors. For example, it may be more advantageous to declare the trump suit when playing a hand in which the trump rank is also a point card (King, 10, 5), and it may be less advantageous to declare the trump suit if one’s partner is the Dealer. It is also very lucrative to declare no trump suit on a hand when King or 10 is trump, because leading the pair of Jokers will force all players to play Jokers or point cards. In general, playing no trump suit benefits the Opponents as the reduced number of trump cards and the presence of four off-suits make it more difficult for the Dealer to maintain control of the hand.
- **Kitty:** The Dealer should attempt to eliminate at least one entire suit from their hand, so that they have more opportunities to play trump cards and win tricks. Of course, this must be balanced by the risk of putting points in the kitty, as all points in the kitty are at least doubled if the Opponents win the last trick. If there are points in the kitty, the Dealer should have sufficiently strong trump cards in their hand, in terms of both length and rank, to prevent the Opponents from winning the last trick. Voiding suits is less advantageous on hands with no trump suit as it relinquishes control of suits and the reduced number of trumps provides fewer opportunities to trump other suits.
- **What cards to lead:** Many players choose to follow a standard procedure when leading:
  - Early in the hand, lead aces and combinations of highest cards in a suit. Since it is early, the risk of a following player having no cards in the suit and trumping is decreased, so one’s partner may play points.

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<sup>7</sup>Some variants consider *all units* of a matching set of trumps instead of just the relevant unit, requiring that each unit of a later set of trumps be higher than the corresponding units of the earlier set to win.

- Play consecutive pairs early, so that they are not “broken up” by another player’s lead of one pair.
  - To pass the lead to one’s partner, one can play a low trump card, in the hope that one’s partner will win the trick with a high trump card.
  - If one knows that one’s partner is void in some suit, one should lead cards in that suit, so that the partner can trump or discard low cards in other suits. Conversely, by the same reasoning, if one knows that one’s opponent is void of some suit, one should *not* lead cards in that suit.
  - If one has many cards in a suit, it may be possible to “set up” a combination of highest cards in a suit by strategically leading a few cards while holding the rest in reserve and waiting for other players to play the remaining higher cards in the suit. Such a combination lead that includes pairs can be devastating towards the end of the hand, when there are no longer sufficient trumps or trump pairs to trump the lead.
- **What cards to follow:** The simple rule of thumb is to play points if one’s team is likely to win the trick, and to play low non-point cards otherwise. Play high cards to take the lead if one has good cards to lead, or to let one’s partner play points. If one is not trying to win the trick, discard low cards before high cards, unless one’s partner is possibly setting up a throw in that suit.
  - **Counting cards:** It is useful to keep track of when high cards and point cards in each suit are played and who is void of which suit, so that one can estimate other players’ remaining cards and make better decisions concerning which cards are good to play and lead.

## 6 Variants

This section highlights several variants of the game. These can be combined with each other.

### 6.1 Level Advancement Modifications

#### 6.1.1 Accelerated Games— $N$ points per level

This variant changes the  $N$ -point increments in the scoring table from 40 to a lower number like 10 or 20. To determine the number of levels to advance, round the number of points down to the nearest multiple of  $N$ , and divide the difference between this number and 80 points by  $N$ . Therefore, the Opponents still need 80 points to win, but can advance an extra level at 90 or 100 points instead of needing 120, and the Declarers can advance an extra level at 55 or 65 points instead of 35. This rule change makes “every point count” more than the default of  $N = 40$  and accelerates games by advancing teams by more levels at a time.



### 6.1.2 Bi Da (必打)—“Must Play”

This is a fairly common rule that adds a must-play condition to certain levels—usually 2, 5, 10, Jack, and/or King. Note that Ace is always a must-play level, even in the normal version of Sheng Ji. When active at a given level, each team can advance past the level only by playing a hand satisfying three conditions:

- The trump rank is equal to the must-play level.
- The team trying to advance is playing as the Declarers (so the team is at the must-play level).
- The team trying to advance wins the hand (according to the 80-point threshold).

The effect of these conditions is that a team cannot “skip” past the must-play level by scoring well on a hand played while they are still below the must-play level.

The third condition is sometimes eliminated, so that only one (successful or failed) attempt at advancing past the level while playing as Declarers is required.

When 2 is a must-play level, successfully advancing past 2 is known as “**getting out of bed**” (出被窝).

### 6.1.3 Gou Dao Di (勾到底)—“Hooked to the Bottom”

When playing level Jack, the Opponents have the opportunity to reset the Declarers’ level from Jack down to 2.<sup>8</sup> (The “hooking” refers to the shape of the letter “J” in “Jack.”) This occurs if and only if two conditions are met:

- The Opponents take 80 points or more.
- The Opponents win the last trick using at least one of the two Jacks that match the trump rank and trump suit (i.e., whose original suit as shown on the card is the trump suit, not another suit). If the Jack is part of a combination of highest units (whether in leading the highest units remaining within the trump suit or trumping a lead of highest units in another suit), then the Jack must be part of the longest unit within the combination.

If these two conditions are met, the Opponents advance levels and become Declarers as usual, and the Declarers are now at level 2.

### 6.1.4 Quan Yi Ban (圈一半)—“Looped by Half”

When playing level Queen, the Opponents have the opportunity to reset the Declarers’ level from Queen down to 6. (The “looping” refers to the shape of the letter “Q” in “Queen.”) This mechanism works in the same way as Gou Dao Di, but using an appropriate Queen instead of a Jack; see Section 6.1.3.

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<sup>8</sup>Another rule adds the same mechanism at level Ace, where the reset is to level Jack. Then in the next hand, the reset is to level 2.

## 6.2 Chao Di Pi (炒地皮)—“Bidding for Land”

This rule adds an extra dimension to the process of placing the kitty.

The process for starting hands outlined in Sections 3.5 and 3.6 proceeds as normal. However, after the Dealer places the kitty, each player, in counterclockwise order starting from the player to the Dealer’s right and EXCEPT for the player who declared or overrode last during the deal, has the option to override the Dealer with a pair of trumps as described below. The overriding player declares a new trump suit (or no trumps) corresponding to their pair, takes the 8 cards in the kitty, adds them to their hand, and replaces the kitty with any set of 8 cards from their hand. All other players (including the player who declared or overrode last during the deal), in counterclockwise order starting with the player to the right of the player who just overrode, now have the option to override again, which changes the trump suit and replaces the kitty. Multiple players in succession may override in this way. With this rule, it is never optimal to declare a pair of cards during the deal, as one can simply do it during the “Chao” phase with the bonus of swapping cards with the kitty.

A player may override a previous player by throwing down a pair of cards higher than what the previous overriding or declaring player threw down. From high to low, the possible throws are:

1. A pair of big Jokers
2. A pair of small Jokers
3. A pair of spades ♠ of the trump rank
4. A pair of hearts ♥ of the trump rank
5. A pair of clubs ♣ of the trump rank
6. A pair of diamonds ♦ of the trump rank
7. Any of the above may be thrown to override a single card of the trump rank that was thrown during the draw.

## 6.3 Si Shi Fen (四十分)—“Forty Points”

This variant is also known as **Da Bai Fen** (打百分), literally “Contesting A Hundred Points,” named after the number of points in the deck. **Only one deck is used**, so there are no pairs. Thus it is not possible to reinforce or override a suit declaration, or to declare no trump suit, since pairs of Jokers do not exist. Each player draws 12 cards and the kitty is 6 cards. The point threshold for winning a hand as Opponents is now 40 points with 20-point increments for additional levels, as opposed to 80 points with 40-point increments for Sheng Ji with two decks. The scoring table is as follows (with only singles, the bonus factor is always 2, so the maximum score is  $2 \times 60 + 40 = 160$ ):

<b>If Opponents take __ points:</b>	<b>Then:</b>	<b>And:</b>
0	Declarers advance +3 levels	Declarers remain Declarers
5–15	Declarers advance +2 levels	Declarers remain Declarers
20–35	Declarers advance +1 level	Declarers remain Declarers
40–55	No level change	Opponents become Declarers
60–75	Opponents advance +1 level	Opponents become Declarers
80–95	Opponents advance +2 levels	Opponents become Declarers
100–115	Opponents advance +3 levels	Opponents become Declarers
120–135	Opponents advance +4 levels	Opponents become Declarers
140–155	Opponents advance +5 levels	Opponents become Declarers
160	Opponents advance +6 levels	Opponents become Declarers

The rules of play remain otherwise unchanged—in particular, combinations of highest singles may still be led.

#### 6.4 Sheng Ji with Six Players—two teams of three

To expand the game to 6 players, add a third deck of cards and have two fixed teams of three players each, sitting such that the teams alternate around the table. All three players on a team share a level and advance together. This is an alternative to playing the Zhao Peng You variant, which has non-fixed teams. See Section 6.5 below for more details, disregarding the parts concerning teams and team selection.

#### 6.5 Zhao Peng You (找朋友)—“Finding Friends”

This popular variant of Sheng Ji expands the game to 5, 6, 7, or more players. (It can also be applied to 4 people. For 8 or more players, consider splitting the game into multiple games.) The main difference with the normal version of Sheng Ji is that **teams are not fixed**, but instead change with every hand. Therefore, individual players start at a common initial level, advance levels individually, and win the game if they win a hand while playing Ace on the Dealer’s team.

**Numeric adjustments:** The number of decks  $d$  to use for  $N$  players is  $d = \lfloor \frac{N}{2} \rfloor$ , the Opponents need to take  $40d$  points to win, and the scoring table increases and decreases in increments of  $20d$ . The number of cards in the kitty is adjusted to allow the remaining cards to be evenly distributed among the players. In a game with 3 decks, the point threshold is 120 with increments of 60, and the kitty is 6 cards for 6 people (26 cards per hand) and 8 cards for 7 people (22 cards per hand).

**Dealer and trump rank:** For the first hand of the game, the Dealer label is assigned during the draw as usual. In subsequent hands, the Dealer label rotates to the first player to the previous Dealer’s right who was on the winning team in the previous hand, and their level is the trump rank for the hand.

**A common variant** assigns the Dealer label during the draw for subsequent hands as well.

The person to the right of the previous dealer starts the draw, and all players declare and override trump using their own rank. The last player to declare or override becomes Dealer, sets their suit as the trump suit, and sets their rank as the trump rank.

**Team selection (“finding friends”):** The Declarer team consists of  $\lfloor \frac{N}{2} \rfloor$  players, where  $N$  is the total number of players. (This is the same number as the number of decks used, which makes deck boxes a convenient marker for members of the Declarer team.) The Dealer, who is always on the Declarer team, calls a number of non-trump cards equal to the remaining number of players on the Declarer team. The called cards are specified ordinally—for example, “first Ace of hearts,” “second King of spades.” The players who play the called cards during the course of the hand become members of the Declarer team (“friends” of the Dealer). The other players are then members of the Opponent team. Note that it is possible for a player to join the Declarer team multiple times by playing multiple called cards, and the Dealer can join their own team by playing one or more called cards. These actions will result in a smaller Declarer team.)

**Points:** During the hand, point cards are kept separately for each player. A player’s points are discarded if they join the Declarer team. Scoring is done as usual, with the scoring table modified as described above and each member of the winning team advancing individually. As usual, a player may only advance past Ace as a member of the Declarer team. A Dealer with fewer teammates than usual receives a bonus for winning: a promotion of  $n$  levels is increased by another  $n$  levels for each “missing” teammate.

**A common variant** allows “auto-leveling.” In games with an even number of players, the Opponents do not have a strict majority of players. In this case, the variant allows the Opponents to advance an extra level so that *someone* advances a level after every hand.

**Triples:** If three or more decks are used, it is possible to have triples of three identical cards and, more generally,  **$m$ -tuples**<sup>9</sup> of  $m$  identical cards for  $m \geq 2$ . Consecutive triples exist and are called “**airplanes**” (飞机); consecutive quadruples exist and are called “**space shuttles**” (航天飞机); and so on.

- Triples and  $m$ -tuples may be used to **declare the trump suit** during the deal, with longer tuples taking precedence over both shorter tuples of the trump rank and shorter tuples of Jokers in overriding the trump suit. For example, three identical 2s override a pair of identical Jokers, and three identical Jokers override three identical 2s.<sup>10</sup>
- The principles of playing tricks from Section 3.7 generalize.
  - Triples (and higher  $m$ -tuples) are now valid leads, as well as combinations of highest consecutive and/or non-consecutive triples (and higher  $m$ -tuples), consecutive and/or non-consecutive pairs, and singles remaining in a suit. It is possible for such a throw to be

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<sup>9</sup>I use  $m$  here instead of  $n$  to avoid confusion with the earlier discussion of combinations containing sets of consecutive pairs. With higher-order tuples, a set now contains  $n$  consecutive  $m$ -tuples.

<sup>10</sup>Some variants disallow using identical small jokers to declare, to reduce the frequency of hands with no trump suit.

ambiguous (e.g.,  $3\spadesuit-3\spadesuit-3\spadesuit-4\spadesuit-4\spadesuit$  is a throw, as full houses do not exist as a separate unit in Sheng Ji, but is it a tractor plus a single or a triple plus a pair?), so a convention has to be established for how these are evaluated. For example, the leading player may have the right to specify the structure, or a default interpretation may be applied (such as whichever interpretation contains the longest unit). In the event of an illegal throw containing non-highest units, the leader must play the smallest invalid unit according to this priority: single; pair; triple; consecutive pairs of length 2, then length 3, etc.; consecutive triples of length 2, then length 3, etc.; consecutive quadruples of length 2, then length 3, etc.; and so on.

- Following players must still attempt to follow suit and structure to the extent possible; therefore, leading a triple forces following players to play pairs if they have no triples, and leading a pair can force following players to play two cards from a triple if they have no other pairs.<sup>11</sup> Trumping combinations match the structure of a leading combination by containing the same number of total cards, at least as many  $m$ -tuples for each  $m \geq 2$ , and at least as many sets of consecutive  $m$ -tuples of the corresponding lengths for each  $m \geq 2$ . Multiple trumping combinations are compared by evaluating the rank of the longest unit also present in the leading combination. If two units are of the same length, then the one containing the longer tuples is considered longer (e.g., two consecutive triples are higher than three consecutive pairs). Ties are won by the earliest player.
- The **bonus factor** for kitty points is  $2m$  for an  $m$ -tuple and doubles for each additional  $m$ -tuple. Thus, the bonus factor for a triple is 6, for two consecutive triples is 12, for a quadruple is 8, for two consecutive quadruples is 16, and so on.

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- Various members of the Colonial Club of Princeton University, for spreading the game to even more members and enhancing the author’s understanding of the game.
- The author’s parents, for graciously teaching the game to the author.

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<sup>11</sup>Some variants allow triples in following players’ hands to be “protected” if the leader leads a pair, so that if following players have one or more triples but no pairs, they are not obligated to play two cards from a triple.