

Section 2. Check “Green Book”!

“Green Book” is a collection of rules and regulations for playing mahjong under “Mahjong Competition Rules” (MCR). This section contains mysteries referring to a wide range of rules from “Green Book”.

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Mysteries

2-1. Sherlock Holmes in Buckingham Palace

Recently, an event one can only dream of, happened. The great detective Sherlock Holmes was invited to an audience with the Queen in Buckingham Palace in recognition of his hard work.

Great excitement was caused by the news that the Queen had heard about the new game of mahjong. So Holmes, together with Dr. Watson, Inspector Lestrade, and diplomatic officer Wan Dongtiao, came to the palace to arrange for a presentation of this game at the reception.

Dialogues

Let’s review some highlights of conversation from the reception. These were carefully recorded to phonograph by Mahjong News reporter Mr. Martin.

“The Queen, dressed all in green, arrived by a carriage drawn by seven pairs of horses. These were not just simple horses, but all purebreds.”

“The Ministerial Office consists of twelve persons headed by the Prime Minister. Each of these persons has no relatives due to the time it took to complete the special training to become statesmen.”

“The grounds of Buckingham Palace have exactly nine gates. The upper four floors of the main building are constructed in Eastern style, the lower four in European. In the garden, amidst all types of flowers, is a cage containing three lizards called little three dragons.”
“Could you break a 100-pound bill into 20’s? No, I have only all fives in my purse.”

Later on during the game, reporter Martin noticed that some mahjong declarations **fully coincided** with remarks at the reception.

Question: Please, name all fans that could be deciphered from conversation during the reception.

[Hint](#)

[Solution](#)



2-2. Thirteen Tiles from the Wall

Our four friends – Mrs. Hudson, Sherlock Holmes, Dr. Watson and Inspector Lestrade – are playing mahjong. Please solve the following problem. Here is what is known:

- the wall consists of exactly thirteen tiles;
- it is Mrs. Hudson’s move;
- Mrs. Hudson’s hand is concealed;
- all thirteen tiles were taken from the wall during one move.

Question: Please, point out the fans in the winning hand (only those which are known **for sure**) provided thirteen tiles were taken from the wall and thirteen valid declarations (calls) were made.

[Hint](#)

[Solution](#)



2-3. Negative Fan

Sherlock Holmes and Dr. Watson are drinking their morning coffee in the lounge. Watson is reading an article in “Mahjong News”, ‘Curious accident occurred at London’s Mahjong Championship. A player declared mahjong and listed fan(s). The other player has **added** a fan to the winning hand and hence the hand value **decreased**.’

“How can this have happened?” Dr. Watson asked loudly. “And what is the number of this **negative** fan in the ‘Green Book’?” questioned Mrs. Hudson.

“Please, calm down, my friends,” said Holmes. “It’s rather elementary! The matter is...”

Question: Please, explain what has happened.

[Hint](#)

[Solution](#)



2-4. Mrs. Hudson's New Fan

There was an ordinary game of mahjong at 221B Baker Street. Mrs. Hudson was sitting at the East position. She looked very carefully at her starting hand (fourteen tiles, no flowers) and said, "Gentlemen! Tiles of my hand form a valid hand structure though I cannot recognize a fan. I have looked at my tiles **up and down** but no way! I wish someday a new fan describing my hand might be added to the list!"

Question: Please, describe Mrs. Hudson's starting hand and explain what this new fan is about.

[Hint](#)

[Solution](#)



2-5. 88 Points from Scratch

At 221B Baker Street, there is a discussion of high-scoring fans.

"You see, one cannot declare all seven existing 88 pts. fans from the very start of the deal," said Holmes.

"Surely, you cannot declare "Four Kongs" without replacing four tiles from the wall."

"There is one more fan," remarked Holmes.

Question: Which 88 pts. fan beside "Four Kongs" East cannot be declared from the very start of the deal?

[Hint](#)

[Solution](#)



2-6. About Discards

This mystery contains several questions under the topic of "Discards". Common to all the questions – mahjong is declared. The zone of interest is the discard zone, and the circumstances are all according to MCR rules.

Questions

Question 1: What is the *minimum* number of tiles in the discards zone of a player who declared mahjong, provided that there are no tiles in the discard zones from any other player?

Question 2: What is the *maximum* number of tiles in the discard zone of a player who declared mahjong, provided that there are no tiles in the discard zones from any other player?

Question 3: What is the *maximum* number of tiles in the discard zone of all players, provided that the number of discarded tiles for three of the players are equal, and there are no tiles in the discard zone of the 4th player?

Question 4: What is the *maximum* number of tiles in the discard zone of a player, provided that there are no tiles in the discard zones of other players?

Question 5: What is the *maximum* total number of tiles in the discard zone of all the players, provided that there are no tiles in the discard zones of one player?

[Solution](#)



2-7. Absent-Minded Mrs. Hudson

During morning coffee, Sherlock Holmes and Dr. Watson are reading "Mahjong News" on their tablets about the recently held MCR Championship of London.

"The championship took place without any incidents," reads Watson, "not counting two appeals from Mrs. Hudson, who was able to get first place! Remarkably, both appeals relate to the same rule; paragraph 1.9. of MERS Tournament Regulations - Mahjong Competition Rules." After Mrs. Hudson's convincing arguments, the judge ruled both times in her favour.

"Watson," Holmes remarked, puffing on his pipe. "Isn't that the paragraph about placing the winning tile into the hand?"

"Quite right," confirmed Dr. Watson. "And here is a quote of that rule":

"1.9. Clearly show your winning tile, either claimed or self-drawn. Failing to do so results in not being allowed to claim points for 'Single, Edge or Middle wait', 'Last tile' and 'Nine Gates'."

Question: Please, explain how Mrs. Hudson was able to convince a judge to allow points on two separate occasions; with two *different* fans as listed in rule 1.9, despite her having absent-mindedly violated the rule in question.

[Hint](#)

[Solution](#)



2-8. Let's Score

Before a traditional game at 221B Baker Street, there is a mahjong class. Mrs. Hudson is asking Sherlock Holmes, "If a complete hand allows multiple ways to score, what is the appropriate way to manage that?"

"According to the "Green Book", after a player declares "Hu", the player should clearly do several things: break the hand into sets with a valid hand structure, indicate clearly which set will be formed with the winning tile, and then score fan."

"Let's consider an interesting hand. Imagine that the player declares "Hu" on his 10th turn

with this concealed hand  winning on the discarded . How can one best score this hand? Please note, there are several ways to structure the hand to answer the above-stated question."

Question: Please, provide *all* possible variants of scoring this hand's value (list all fan for the relevant structures).

[Hint](#)

[Solution](#)



2-9. Final Session Duel

By the final session of the London MCR Championship, Professor Moriarty has taken the first position with a tremendous lead of 4 table points and 100 game points above second place, who is Sherlock Holmes. Sherlock can win the championship only under the rarest of circumstances: Sherlock must win his last table, and Moriarty must lose it. Luckily for Holmes, the two meet at the same table. Before the last deal of the session and of the entire championship, a miracle for Sherlock was beginning to take shape. Sherlock (East) has 90, Moriarty (South) has -39, Mrs. Hudson (West) has -21, and Moran (North) has -30 points.

By the middle of a deal, Sherlock is waiting with this hand: concealed –  , melded –  . Moriarty, on the

right, has melded three sets including a dragon pung. The situation is very clear: Sherlock can win from the wall with any hand, from Mrs. Hudson with a hand which scores **no more than** 17 points, or from Moran with a hand which scores **no more than** 8. If Sherlock wins from Moran any more than 8 points, Moriarty will bump up to 3rd place, earning him 1 TP, and winning him the championship. Sherlock's chances to win also include a "Hu" by either Moran or Mrs. Hudson, but only if they win with a small hand.



Mrs. Hudson discards  and Moriarty pungs it. Moriarty now has four melded sets with two obvious points, so he can now win on any discard. In two moves, thunder and lightning



strike: Moran on the left of Sherlock discards  and Moriarty on the right declares "Hu".

"So, the London Championship was won by Moriarty?" asked Watson at home.

"No way," Sherlock replied, showing the Champion's Cup.

"But how?"

"Players should know the "Green Book". It is the Bible and the law for the mahjong player."

Question: Please, explain what happened and how Sherlock managed to win the championship?

[Hint](#)

[Solution](#)



2-10. Legally... Robbed (story)

Dr. Watson is reading an article in "Mahjong News", 'At the MCR London championship 2011, an accident took place. Judges had to make an extremely difficult decision. Clarifications could be made only when both rulebooks – Chinese and English – were thoroughly examined.'

So, Mrs. Hudson is playing at the MCR tournament. Her hand is:

melded – , , , concealed – , .

She picks . "Looks like mahjong? Oh, no! Too few points:

- 4 = Last Tile;
- 2 = Tile Hog;
- 1 = Self-Drawn.

Totaling = 7 pts."

“One point is missing, what a pity! Once there is no mahjong I would declare Kong” she thought. “Kong!” Suddenly, a very queer thought came to her mind, “I can Rob it!” “Hu!” she declared proudly.

“Where is mahjong? You have only seven points!” questioned one of the opponents.

“I robbed a Kong!”

“But you can’t do it! That Kong is **yours!**”

“Really? I think I can!” Mrs. Hudson opened the “Green Book”. “Let’s call a judge and read out altogether.”

“Green Book”

Two judges came to the table – one British and one Chinese.

“See p.20, description of fan #47 “Robbing The Kong”: “Winning off the tile that somebody adds to a melded pung (to create a Kong). (The points for Last Tile may not be combined.)” – read aloud Mrs. Hudson.

“See the word “**somebody**”? I am English, this is my native language. I know what the word “**somebody**” means. It can be any person including yourself surely.”

After a huge silence, the pause was broken by the Chinese judge.

“You see, madam, there is another text in the “Green Book”. See the end of “Preface” section at p.3”, “These rules and regulations exist in both Chinese and English editions. As disputes may arise out of a faulty translation or different understandings, they must be settled according to the original Chinese edition.”

“I must assure you, Madam, that in Chinese we use characters 他人 tā rén “other person(s)”. That is correct. We undoubtedly have to contact the Rules Committee regarding this issue that has occurred. As for your hand, we can not count it as mahjong. Though I propose to not penalize you. Simply continue to play after you have made a Kong.”

“Thank you very much!” said Mrs. Hudson and opened replacement tile. It was . I knew it! Hu!”

Note: This piece of “Sherlock Holmes and Mahjong” series comes in the form of a story without questions. The author’s intentions were merely to urge players to read the original rules text more carefully. See, there is a big difference between “another player” and “somebody”.



Hints

2-1. Sherlock Holmes in Buckingham Palace

Read the text.

[Solution](#)



2-2. Thirteen Tiles from the Wall

Which two declarations allow one to take more tiles from the wall during the same move?

[Solution](#)



2-3. Negative Fan

Which fan is not valid if a hand has any points?

[Solution](#)



2-4. Mrs. Hudson's New Fan

Which group of tiles consists exactly of fourteen tiles?

[Solution](#)



2-5. 88 Points from Scratch

Which 88 pts. fan requires a wait?

[Solution](#)



2-7. Absent-Minded Mrs. Hudson

Any tile in the concealed portion of Mrs. Hudson's hand meets the requirements for the fan under consideration.

[Solution](#)



2-8. Let's Score

Please:

- break hand into sets with valid a hand structure;
- indicate clearly which set will be formed with the winning tile;
- score fans.

Repeat the process for as many times as the hand allows.

[Solution](#)



2-9. Final Session Duel

One is free to choose fans which add up to exactly eight points.

[Solution](#)



Solutions

2-1. Sherlock Holmes in Buckingham Palace

Here is a list of deciphered fans:

- "All Green";
- "Seven Pairs";
- "Pure Suit";
- "Thirteen Orphans";
- "Nine Gates";
- "Upper Four";
- "Lower Four";
- "All Types";
- "Flower Tiles";
- "Little Three Dragons";
- "All Fives."



2-2. Thirteen Tiles from the Wall

The Wall consists of exactly thirteen tiles. Mrs. Hudson has to move. She takes a tile. “Kong!” and she takes another tile. “Kong!” and she placed two more kongs.



Having four kongs at the table and  in hand she hoped to get a tile for the Pair and mahjong. She drew a Flower.

“Flower!” she took a tile and declared seven more Flowers. The gentlemen followed silently.



After all that, Mrs. Hudson takes another  tile and declares “Hu!” Fans (counted for sure):

- 88 = Four Kongs;
- 64 = Four Concealed Pungs;
- 8 = Last Tile from the Wall;
- 4 = Fully Concealed Hand;
- 1*8 = Flower (8 times).



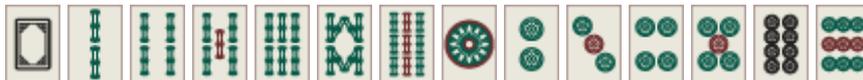
2-3. Negative Fan

The main fan was undoubtedly a “Chicken Hand”. A player missed adding another fan (costing less than 8 pts.), which was added by the other player. Hence, the total hand value decreased (“Chicken Hand” is no longer a valid fan).



2-4. Mrs. Hudson’s New Fan

Sherlock Holmes said, “Since you have looked at your tiles *up and down*, I assume that your starting hand is...”:



“Wonderful! And the new fan is Single Reversible Tiles!” exclaimed Dr. Watson.



2-5. 88 Points from Scratch

When tiles are dealt from the wall, East receives fourteen tiles as-a-bundle having no opportunity to separate them. For the fan #4 “Nine Gates” a player, in order to show a 9-sided wait, must have only thirteen tiles and the 14th should come from *outside* the hand. Since East has fourteen tiles “Nine Gates” cannot be declared during East’s initial move.



2-6. About Discards

Note: In the solution below:

- “DZ” stands for “discard zone”;
- “DZ=N” means that DZ has exactly N tiles;
- “EDZ”, “SDZ”, “WDZ”, “NDZ” stand for discard zone of players: East, South, West, North.

General consideration. Please, note that:

- regular hand structure “3+3+3+3+2” (where “3” may be Chow/ Pung/ Kong) allows claiming discards for sets / mahjong declarations up to five times;
- semi-regular hand structure “3+2+ Knitted Straight” allows claiming discards for set/ mahjong declarations only twice;
- hand structures “7*2”, “14*1”, “2+12*1” are considered to be concealed, so they allow claiming discard only once, for mahjong.

Answer 1. 0. Obviously, mahjong was declared by East immediately after the flower replacement phase.

Answer 2. 5. East starts the deal and makes a discard, EDZ=1. Further discards by South, West or North are intercepted by East, EDZ=2. This situation is repeated three more times until EDZ=5. Please, note, that any discard might be intercepted by Chow/ Pung/ Kong declaration of South, West or North at any stage. It is important that none of the discards of South, West or North is left unclaimed.

Answer 3. 15 (three times 5 tiles). Mahjong will be declared by North. East (the player to the right of the North) starts discarding, EDZ=1. This is followed by South, SDZ=1, and West, WDZ=1. North’s discard is taken by East, so NDZ=0, and East has one melded set. Another round of discards leads to EDZ=SDZ=WDZ=2. North’s discard is taken again by East, so NDZ=0, and East has two melded sets. Let’s repeat this procedure two more times. EDZ=SDZ=WDZ=4, NDZ=0, East has four melded sets. Now, another round of discards leads to EDZ=SDZ=WDZ=5. North declares mahjong from the wall, so NDZ=0. Please note that some of the discards of North or even East may be taken by South or West, though it is crucial that East ultimately has to intercept the last discard of this series.

Answer 4. 5. Getting a tile in the DZ after discard interception is possible only when declaring set/ mahjong. Four melded sets of a player mean DZ=4 for that player. An additional tile in the DZ is only possible after discarding in the first move, so the player is East. The solution coincides with Answer 2.

Answer 5. 27! Mahjong will be declared by North. The solution partly resembles Answer 3, though there is no need for the number of tiles in EDZ, SDZ, and WDZ to be equal. So, after WDZ=5 (as in the Answer 3 solution) North’s discard is taken by South (!) since 4 sets of East have already been melded, EDZ=5. South discards, one set of South is melded, SDZ=6, West discards, WDZ=6. Repeating this procedure three more times, we have: EDZ=5, SDZ=9, WDZ=9. Only West has a concealed hand. Now, North’s discard is taken by West (!), and repeating this procedure three more times after West’s discard we come to

EDZ=5, SDZ=9, WZ=13, totaling 5+9+13=27 tiles in DZ while NDZ=0. North, in turn, declares mahjong from the wall.



2-7. Absent-Minded Mrs. Hudson

The basic idea of this solution is that despite the fact that Mrs. Hudson had placed the winning tile into her hand, it wouldn't have mattered which tile was her winning tile since **any** tile in the concealed portion of her hand could meet the necessary condition for the fan under consideration. This approach may seem controversial and dubious if you follow the letter of the "Regulations". The judge, however, ruled in favor of Mrs. Hudson. So, what might these two fans be?

It is obvious that fans like "Closed Wait" and "Edge Wait" are not the case because among the three tiles of the chow there is at least one tile which would never meet criteria for the one point wait. Also, a "Nine Gates" fan cannot be considered because it contains nine different suit tiles, eight of which could not meet the criteria for that fan.

So, in the first appeal, Mrs. Hudson had four melded pungs, and a tile was taken from the wall to make a pair and declare "Hu". Despite the fact that she did not clearly show which tile she picked, she was able to convince the judge that **there is no difference** which of the two **identical** tiles she put into her hand, so the fan was counted.

In the second appeal, Mrs. Hudson announced mahjong on a knitted hand ("Greater / Lesser Honors and Knitted Tiles"), putting the winning tile into her hand. During the scoring procedure, she attempted to score points for the fan "Last Tile". Fan description says: "Winning on a tile that is the last of its kind. It must be clear to all players based on the discards and exposures."

Her opponents argued that she could not do this because it is **impossible** to determine which tile to apply the fan "Last Tile" to.

Unbelievably, it turns out that for **any** of the fourteen tiles in Mrs. Hudson's hand, there were three copies of that same tile on the table amongst discards and melded sets! The judge again ruled in favor of Mrs. Hudson, since it wouldn't matter which of her fourteen tiles was the last since all of them were the last of its kind.

Appendix

Here is an example of how the hand may have worked out for the second appeal. Mrs. Hudson is sitting as North, and her starting hand was almost a completed knitted hand

(twelve tiles are ready): 

East discards , a useful tile to complete Mrs. Hudson's hand. South and West, in turn, discard the same tile. Mrs. Hudson takes  into her hand and then after discarding  she is waiting! Suddenly, a "pangonade" occurs – a cannonade of declared pungs breaks out.

East declares "Pung!" and discards . South declares "Pung!" and discards . West declares "Pung!" and discards . East declares "Pung!" and discards . South declares "Pung!" and discards . West declares "Pung!" and discards . East declares "Pung!" and discards . South declares "Pung!" and discards . West declares "Pung!" and discards . South declares "Pung!" and discards . West declares "Pung!" and discards . East declares "Pung!" and discards . South discards . West discards . Mrs. Hudson draws the 4th  from the wall, places it into her hand and then declares "Hu!"

In fact, out of the fourteen different tiles in Mrs. Hudson's hand, one can find twelve examples where there are three copies of those tiles in the form of melded pungs, and two examples where there are three copies of those tiles in the discard pool.



2-8. Let's Score

Scoring hand value depends solely on the decision of the player to break the hand into sets, as well as on the placing of the winning tile to some set. First of all, please, note that three group fans can be applied regardless of breaking into the sets:

- 24 = fan #22 "Full Flush";
- 12 = fan #37 "Lower Four";
- 8 = fan #40 "Reversible Tiles".

Total: 24+12+8=44 points.



Variant 1.

“Seven Pairs” structure:

- 24 = fan #19 “Seven Pairs”;
- 2*3 = fan #64 “Tile Hog” (three times).

Total: 44+24+6=74 points.



Variant 2.

- 48 = fan #14 “Quadruple Chow”;
- 2 = fan #63 “All Chows”;
- 2 = fan #62 “Concealed Hand”.

Total: 44+48+2+2=96 points.



Variant 3.

- 24 = fan #24 “Pure Shifted Pungs”;
- 16 = fan #33 “Three Concealed Pungs”;
- 2*3 = fan #64 “Tile Hog” (three times);
- 2 = fan #62 “Concealed Hand”;
- 1 = fan #73 “Pung of Terminals or Honors”.

Total: 44+24+16+6+2+1=93 points.



Variant 4.

- 24 = fan #24 “Pure Shifted Pungs”;
- 2*3 = fan #64 “Tile Hog” (three times);
- 2 = fan #66 “Two Concealed Pungs”;
- 2 = fan #62 “Concealed Hand”;
- 1 = fan #73 “Pung of Terminals or Honors”.

Total: 44+24+6+2+2+1=79 points.



Variant 5.

- 2*3 = fan #64 “Tile Hog” (three times);
- 2 = fan #63 “All Chows”;
- 2 = fan #62 “Concealed Hand”;
- 1*2 = fan #69 “Pure Double Chow” (two times).

Total: 44+6+2+2+2=56 points.



2-9. Final Session Duel



Obviously, Holmes can not miss Moran's discard of , since Moriarty's hand has at least eight points for mahjong (two points for a dragon pung and six points for an melded hand). At the same time, Holmes needs to declare mahjong exactly for eight points to win the table and the cup.

Sherlock declares "Hu", takes discard and start to count with discarded tiles *including* four of his own Flowers:

- 2 = Concealed Hand;
- 2 = All Chows;

- 1 = Short Straight ( + );
- 1 = Two Terminal Chows;
- 1 = Mixed Double Chow;
- 1 = Closed Wait.

Totaling $2+2+1+1+1+1=8$ points.

"But wait!" shouted Moran. "Why didn't you score Pure Straight? And what did you do with your Flowers?"

"Calm down, he is right," said Moriarty. "He acts on the basis on "Green Book".

"Green Book"

"Green Book" has several rules on how the hand is scored. Sherlock simply used them to his advantage.

Firstly, a hand is scored not by the judge, and not by the table (by all four players like in riichi) but *solely* by the player. "The player himself must declare points (adding up the Fan Points of his hand). Then the other players may check, and the referee verifies." This means that nobody can interfere with the player.

Secondly, whenever there is a choice, the player can choose. In p.3.9.1.6 (4) it reads: '(4) Freedom to Choose the Highest Points ("the High-versus-Low Principle"): If you can use a set to form both a high-score fan and a low-score fan, it is your right to choose the high-score fan.'

For this once in a lifetime event, from amongst all of the players, the winner has decided to choose low-scoring fans. Finally, tiles from the hand are used for counting, this constitutes a foul. If Flower tiles are used, then the hand remains, but the player forfeits the points for the flowers tiles that were used for scoring.

P.S. This mystery is based on real-life play at the MCR Russian Open 2015.

