

MALLARD IN WONDERLAND (answer)

by Douglas Ferry

To solve this puzzle you only need to follow the instructions very carefully and keep track of where everything is, especially the playing cards. However, at each step there are some things going on that are unstated. First, you must examine the state of things at all times to see whether any of the Duck rules should be applied. Second, each of the tea party guests has a particular “quirk” that they do all the time but the exact nature of which can only be found by reading through all the instructions.

Here are the guests’ quirks:

The Dormouse falls asleep upon eating a biscuit. Once asleep, he does not participate in the proceedings. If someone tries to sit on him (say, because they were asked to change seats or everyone is moving down), that wakes him up and he takes the next empty seat to the left. This information is spelled out in instructions 23 and 28.

Alice’s quirk is explained in instruction 28. Simply put, any time someone asks Alice to do something, she drinks her tea and then does it. If she has no tea, then she instead pours herself tea and pours for the nearest empty cup to her right (and she still carries out the request).

The March Hare always mixes up right and left when asked to do something. See instruction 24.

The Mad Hatter’s quirk is explained in instruction 26. If the Hatter is asked to do something he ignores the request and instead forces everyone to move clockwise one chair. Note that the March Hare’s quirk does not apply in this case because the Hatter is not *asking* the Hare to move down, he’s *making* him do it. And in any case, they’re going clockwise, not left. The Dormouse does not move in these situations if he’s asleep. An exception to the Hatter’s quirk is when the teapot is empty. In that case he follows instructions and then brews a fresh pot of tea.

Note the difference between instructions that say, “Guest A does B,” and “Guest X asks Guest Y to do Z.” In the former case B definitely happens while in the latter case Z is subject to Guest Y’s quirk.

It’s not clear at the beginning which color seat the Dormouse sits in nor which way you should distribute your “rainbow” (i.e., should orange be left or right of red?). Instead, you should number them 1 through 6 with the Dormouse starting in 1 and keep track of them that way. In instruction 24 the March Hare clearly begins in the red seat and you can then deduce (because you’ve been keeping track) that that’s “seat #1” and thus know the Dormouse’s favorite color is red.

Guests frequently move cards from their hands to their pockets and back. If they exchange clothes, the cards in their pockets go with the clothes.

At the end, if you lay Alice's and the Dormouse's remaining cards on the grid, you get this:

	A	2	3	4	5	6	7	8	9	10	J	Q	K
♠		█	█		█	█	█		█				█
♥	█				█		█		█		█		█
♦	█				█		█		█		█		█
♣		█	█		█	█	█			█		█	

Hence the answer: RED COW

Notes on particular instructions

0. Before the party proper begins, the duck switches the 5-cup teapot with a 4-cup teapot.
1. The Dormouse sits in what we'll call seat #1.
2. The Mad Hatter sits two to the right of the Dormouse, what we'll call seat #3.
3. The March Hare mixes up left and right, and so ends up in seat #4.
4. Alice sits in seat #6.
5. Tea is poured for seats 1, 2, 4, and 6.
6. The March Hare gets the spades, the Dormouse the clubs, the Mad Hatter the diamonds, and Alice the hearts.
7. The Dormouse, at seat #1, eats his biscuit and falls asleep.
8. The Mad Hatter puts sugar in Alice's tea. Normally he would've ignored the request and enforced a "Move Down", but the teapot was empty. He refills the teapot.
9. The Mad Hatter asks the March Hare to ask Alice to steal a tart. The Hare's quirk causes him to ask the Hatter instead. The Hatter's quirk kicks in so he steals nothing and all but the sleeping Dormouse must move down. This results in three adjacent guests, so the duck serves them poi.
10. The March Hare moves to the right to seat #4.
11. Alice gives the 3 of hearts to the Mad Hatter; the Hatter gives the 3 of diamonds to the March Hare; the Hare gives the 3 of spades to Alice. The Dormouse has been asleep since step 7.

12. The Hatter asks Alice to eat the food on her plate and she does. But first (per her quirk), because she has no tea, she pours tea for her place and the only other cup on the table with no tea.
13. No player has two biscuits. Alice has no tart and the Mad Hatter is across from her so she asks him to throw his tart. There being tea in the pot, the Hatter instead enforces a "Move Down". The Dormouse, in seat #1, gets sat upon by the Hatter and wakes up and moves to seat #6.
14. The duck hasn't laid an egg, so everyone except the Dormouse (whose tea has sugar) drinks their tea. For those playing at home, that's tea drunk from seats 1, 3, and 4.
15. Alice, the Mad Hatter, and the March Hare transfer 2s, 4s, 6s, 8s, 10s, and queens to their pockets. The Dormouse has no pockets and does nothing.
16. Alice and a tart move from seat #4 to seat #5. There being 3 guests adjacent now (seats 5, 6, and 1), they all get poi.
17. The March Hare moves left to seat #2, drinks the tea there, and gives Alice his place's tart. Since Alice now has two tarts, the duck burns the cards in her pocket (all the even hearts from step 15) and reverts the extra tart to the table center. There are 4 adjacent guests, so the duck eats their poi.
18. There are three sub steps here, one for each guest Alice asks to do something:
 - a. The March Hare examines the seat to his right (seat #3), finds the plate full, and so eats the food. This includes poi, so the duck lays an egg.
 - b. The Mad Hatter is next. The teapot is not empty, so he enforces a "Move Down". The duck would eat their poi now if they had any.
 - c. The Dormouse examines the seat to his left, finds it lacking, and so pours milk for the Mad Hatter. This triggers the duck to give the Hatter a biscuit.
19. No guests have poi. Only the Mad Hatter has milk, so he swaps cards in his hand with those in his pocket. That results in: hand contains 2, 4, 6, 8, 10, Q of diamonds, pocket contains A, 5, 7, 9, J, K of diamonds and the 3 of hearts.
20. The Mad Hatter gives his clothes, along with the cards in the pocket, to the Dormouse.
21. The Dormouse drinks his tea and eats the 3 of hearts from his pocket.
22. The March Hare and Dormouse transfer cards from their pockets to their hands. Alice and the Mad Hatter had nothing in their pockets. The Dormouse puts the ace and jack of clubs back in his pocket.
23. The Dormouse eats the biscuit from Alice's place (seat #4) and falls asleep.

24. The March Hare moves from seat #1 to seat #6. This reveals that seat #1 is red and seat #6 is purple! There are now 4 adjacent guests so the duck eats their poi.
25. Since the duck has laid an egg, the March Hare pours Alice tea and they drink it. This leaves the cups empty of tea, so the duck takes the 2, 5, and 7 of spades (black, prime number cards) from the Hare and gives them to Alice.
26. The Mad Hatter yet again ignores the March Hare's request and enforces a "Move Down". The Dormouse gets woken up. The duck would eat the 4 adjacent guests' poi if they had any.
27. The Mad Hatter steals the 4 and 8 of spades from the March Hare and the 4 and 8 of clubs from the Dormouse. Alice has no 4s or 8s.
28. The Dormouse gets a new tart from the table center. Alice (per her quirk) serves herself tea. She would pour for another place but the pot is now empty.
29. The March Hare passes his tart left and moves right. The Dormouse now has two tarts, so the duck burns cards in his pocket and puts the second tart back in the center. The burned cards are the ace and jack of clubs from step 22. There are three adjacent guests now (Alice, Mad Hatter, Dormouse) so they get poi.
30. Alice asks the Mad Hatter to accuse the March Hare and Dormouse of cheating. The teapot being empty, he obeys and refills the pot. The Hare and the Dormouse swap the 9s and Kings of clubs and spades with each other. The 6 of spades goes to the Hare's pocket, the 6 of clubs to the Dormouse's pocket.
31. The March Hare has two biscuits, so the guests who got poi in step 29 throw it at the duck. The duck leaves until step 35.
32. Alice swaps clothes with the March Hare. This nets her the 6 of spades in the Hare's pocket.
33. The March Hare leaves with the teaspoons. The Dormouse takes his seat (#6, or purple).
34. The Mad Hatter is hauled off. The Dormouse eats a biscuit and falls asleep.
35. Alice serves herself tea, milk and sugar. The duck, now back, recites the "Jabberwocky". If your duck does not do this, please report the defective duck to Puzzle Central.