David Alciatore, PhD ("Dr. Dave") **ILLUSTRATED PRINCIPLES**

"Rules - Part I: introduction"

***Note**: Supporting narrated video (NV) demonstrations, high-speed video (HSV) clips, and technical proofs (TP), and all of my past articles, can be accessed and viewed online at **billiards.colostate.edu**. The reference numbers used in the article help you locate the resources on the website. If you have a slow or inconvenient Internet connection, you might want to view the resources from a CD-ROM or DVD. Details can be found online at: **dr-dave-billiards.com**.*

This is the first article in a series on pool rules. Recently, fellow BD columnist Bob Jewett and I spent a weekend filming hundreds of shots, with both regular and high-speed video cameras, for a rules quiz. I also created some instructional videos and posted them online along with the quiz. Bob has been very active over the years serving on rules committees, playing a lead role as a rules author, and training referees. The purpose of the quiz and other online videos is to help people (players and referees) evaluate and improve their level of understanding of the official rules of pool, and to get better at applying the rules in various game situations.

NV B.61 contains the rules quiz video. The quiz consists of 100 different shots. Your job is to judge each shot as "fair" or "foul." There are slight differences in rules from one league and tournament to the next, but most rule sets follow fairly closely the official and internationally-recognized **World Standardized Rules** published by the World Pool-Billiards Association (WPA). The complete rules can be viewed online at **www.wpa-pool.com**. You should judge each quiz shot according to the official WPA rules. There are many types of fouls, but the ones focused on in the quiz video are:

- not contacting a rail after the cue ball (CB) hits the object ball (OB)
- hitting the wrong ball with the CB first
- double hitting the CB
- pushing the CB with the cue
- touching balls
- 9-ball push-out violations
- illegal "scoop" jump shots

If you are not familiar with the rules concerning these types of fouls, you might want to visit the WPA site and study up a little before attempting the quiz.

I hope you will want to try out the quiz to test how well you know the rules. If so, follow the following steps:

1. Print a copy of the **quiz scoring sheet**. Links to all of the resources and videos cited in this article can be found in the "Instructor and Student Resources" section of my website (**billiards.colostate.edu**) under "references and rules – referee quiz."

2. View the still image before each shot showing the shot number and any specific information not obvious in the image (e.g., whether or not balls are frozen). The still image remains on the screen for a few seconds, but you can also press the pause button to give yourself more time to study the shot layout.

3. Watch the video clip of the shot. Press the pause button after the clip, and record your ruling ("fair" or "foul") on the scoring sheet. If you need to, rewind the video to review a shot if you think you missed something, but try to limit how much you do this. If you have any uncertainty about the shot, or if you think you had to make any assumptions to make your ruling, record comments on the answer sheet.

4. Do steps 2 and 3 for all 100 shots in the quiz.

5. Check all of your answers against the rulings on the **quiz answer sheet**. You can also view all of the answers and brief explanations in **NV B.62**. You can be lenient with yourself on the shots marked "TOUGH CALL" on the answer sheet, provided you understood the issues involved with the shot, and your comments (on your answer sheet) addressed any uncertainty.

I recommend you go online now and take the quiz, before reading the remainder of this article. That way you will get a good measure of your current understanding of the rules. Be a "good student" and don't cheat by looking at the answer sheet or video before you finish your scoring sheet.


normal video

NV B.61 – Pool rules quiz for referees and players, with Bob Jewett
NV B.62 – Answers to pool rules quiz for referees and players
NV B.63 – Instruction for pool rules quiz

Your score is out of 100 (just like in school). If you are an experienced referee, your score should be close to 100. If you are not very familiar with the official rules of pool, you might do quite poorly (e.g., 50-70). I recently announced the quiz on the BD-CCB and AZB online forums, and about 20 people shared their scores. The high was 97 (from an experienced referee), the low was 70, and the average was 83. I honestly don't know how "representative" this range is because we don't know much about the people who were willing to share the scores, but the range is about what Bob and I expected (although, we would expect lower scores from people who might not be very "rules-savvy.")

If you did poorly in the quiz, you might want to view the instructional videos in **NV B.63.** They provide useful information and advice on how to interpret and apply the rules in different game situations. Then you can try the quiz again to see how you improve. NV B.63 contains instructional segments for each of the following situations:

- part 1: CB frozen to the OB
- part 2: small gap between the CB and OB
- part 3: rail cut shots
- part 4: balls frozen to rails
- part 5: determining which ball is hit first
- part 6: miscellaneous fouls

In future articles, we will look at examples from all of these categories. Here, I want to cover two types of shots that won't be covered in future months: kiss-back shots and shots where both the CB and OB are frozen to a rail. To judge these types of shots, you must have a good understanding of WPA Rules 6.3 and 8.4:

6.3 No Rail after Contact

If no ball is pocketed on a shot, the cue ball must contact an object ball, and after that contact at least one ball (cue ball or any object ball) must be driven to a rail, or the shot is a foul.

8.4 Driven to a Rail

A ball is said to be driven to a rail if it is not touching that rail and then touches that rail. A ball touching at the start of a shot (said to be "frozen" to the rail) is not considered driven to that rail unless it leaves the rail and returns. A ball that is pocketed or driven off the table is also considered to have been driven to a rail. A ball is assumed not to be frozen to any rail unless it is declared frozen by the referee, the shooter, or the opponent.

Diagram 1 shows several kiss-back shot examples. These types of shots can be used in safety play, where there are nearby balls to serve as blockers, or where you want to create distance between the balls and leave one or both of them close to rails. The quiz shot numbers appear in the diagram. Shots "5" (the 1-ball shot) and "26" (the 3-ball shot) are fouls because neither the CB nor the OB makes new contact with a rail after ball contact. Shots "19" (the 2-ball shot) and "33" (the 4-ball shot) are fair because the CB is driven to a rail after ball contact. As is clear in WPA Rule 8.4, an OB frozen to a rail before (and during) ball contact does not count as "rail contact." Something must be "driven to a rail" after OB contact.

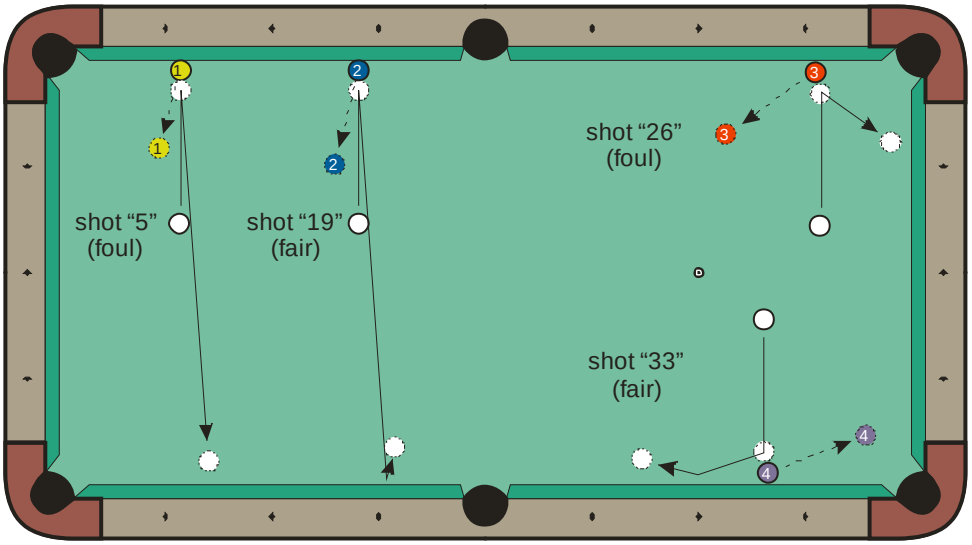

Diagram 1 Kiss-back shot examples

Diagram 2 shows two examples where both the CB and OB are frozen to the rail. In shot "6" (the 1-ball shot), the CB is hit parallel to the rail, and the CB hugs the rail on the way to the 1-ball. However, the CB drifts away slightly and returns to the rail (due to the "pull" of the rail "groove" or "gutter") as it approaches the side pocket, resulting in "new contact" with the rail. The 1-ball also hugs the rail on the way to the side pocket but drifts away slightly in the pocket opening and doesn't contact the rail on the other side of the pocket. Because the CB made new contact with the rail after ball contact, the shot is fair. If the CB had remained along the rail (didn't leave and come back), this shot would have been a foul. If the CB had remained along the rail, and the 1-ball had been driven to the rail on the other side of the side pocket, the shot would have been fair because the 1-ball would have made new rail contact. Some people think a ball must be driven to a new rail after contact, and the same rail (on either side of the side pocket) would not count, but this is not the case with the current official WPA rules. In shot "34" (the 2-ball shot), the CB leaves the rail slightly and hits the 2-ball at a small angle, deflecting the 2-ball away from the rail. Nothing (neither the CB nor the 2-ball) makes new contact with a rail after ball contact, so this shot is a foul.

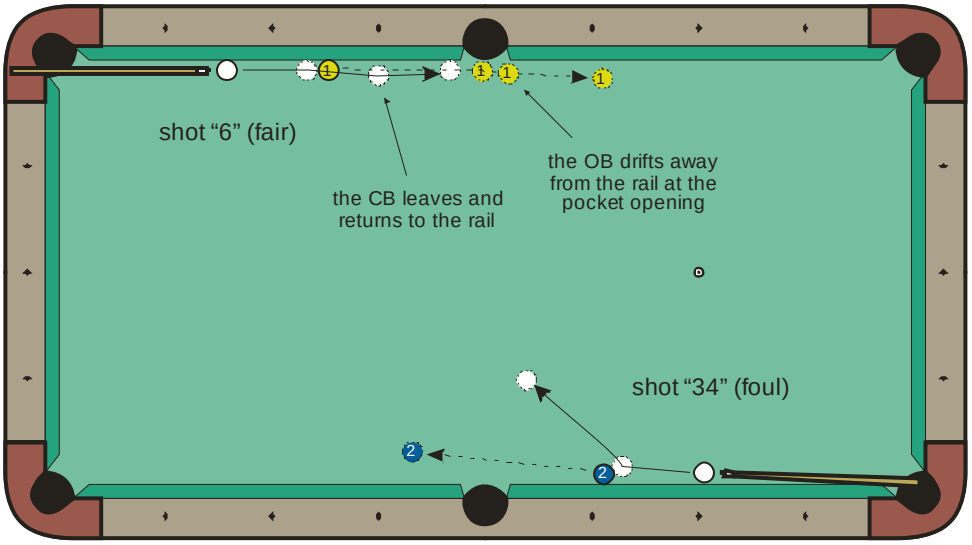

Diagram 2 Rail-frozen ball examples

Differences between fair and foul shots like the ones in Diagrams 1 and 2 can sometimes be very subtle, and might seem a little “nit-picky” at times, but the rules must be clear on what is fair or foul in every situation; otherwise, the rules could not be applied in a reasonable and consistent way. You can view demonstrations of all of the shots in Diagrams 1 and 2 (and several more similar shots) in “part 4” of **NV B.63**. The video includes the appropriate ruling and an explanation for each shot.

Well, I hope you enjoy and benefit from my series of articles dealing with pool rules. Please encourage all of your pool-playing friends, teammates, and league members to take the quiz and view the instructional videos online. If people had a better understanding of all of the rules and how they are applied, maybe there would be fewer “differences of opinion” and “heated debates” during league night. Next month, we will look at several examples of push shots and double hits, and discuss how to detect and prevent them.

Good luck with your game,
Dr. Dave

PS:

- If you want to refer to any of my previous articles and resources, you can access them online at ***billiards.colostate.edu***.
- I know other authors and I tend to use lots of terminology (e.g., squirt, throw, stun, impact line, etc.), and I know not all readers are totally familiar with these terms. If you ever come across a word or phrase you don’t fully understand, please refer to the online glossary on my website.

Dr. Dave is a mechanical engineering professor at Colorado State University in Fort Collins, CO. He is also author of the book, DVD, and CD-ROM: “The Illustrated Principles of Pool and Billiards,” and the DVD: “High-speed Video Magic.”