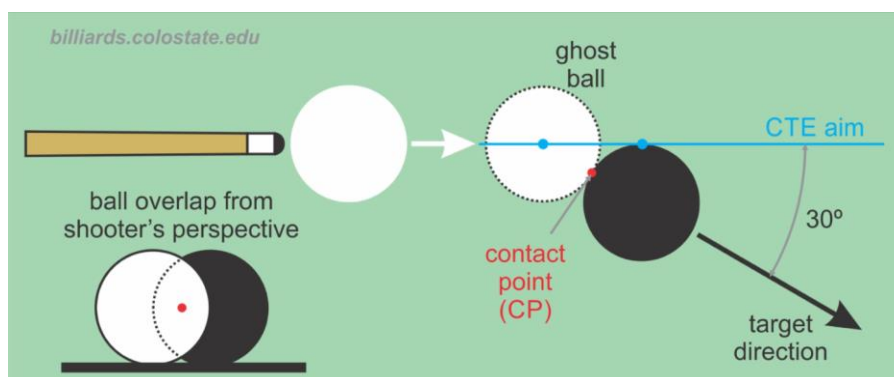


Supporting narrated video (NV) demonstrations, high-speed video (HSV) clips, technical proofs (TP), and all past articles are available online at [billiards.colostate.edu](http://billiards.colostate.edu). Reference numbers used in the articles help you locate the resources on the website.

As illustrated in **Image 1**, a  $\frac{1}{2}$ -ball hit is a  $30^\circ$  cut angle, where the center of the cue ball (CB) is aimed at the edge of the object ball (OB). From the shooter’s perspective, the CB overlaps or eclipses half the OB. This article covers 10 reasons why the  $\frac{1}{2}$ -ball hit is so important and useful. All 10 reasons are also demonstrated in online video [NV L.39](#).



**Image 1**  $\frac{1}{2}$ -ball hit

## 1 – Easy to Aim

The best thing about a  $\frac{1}{2}$ -ball hit is how easy it is to aim. You just need to point your cue through the center of the CB right at the edge of the OB, which is very easy to see and focus on.

## 2 – Good Angle

A  $\frac{1}{2}$ -ball hit is also a good angle to leave for CB control and position play shots. The angle is not too big to make the shot difficult, but it is big enough to easily move the CB around the table in different directions. The video demonstrates a useful target drill that convincingly shows the positional powers of the  $\frac{1}{2}$ -ball hit.

## 3 – Equal Separation

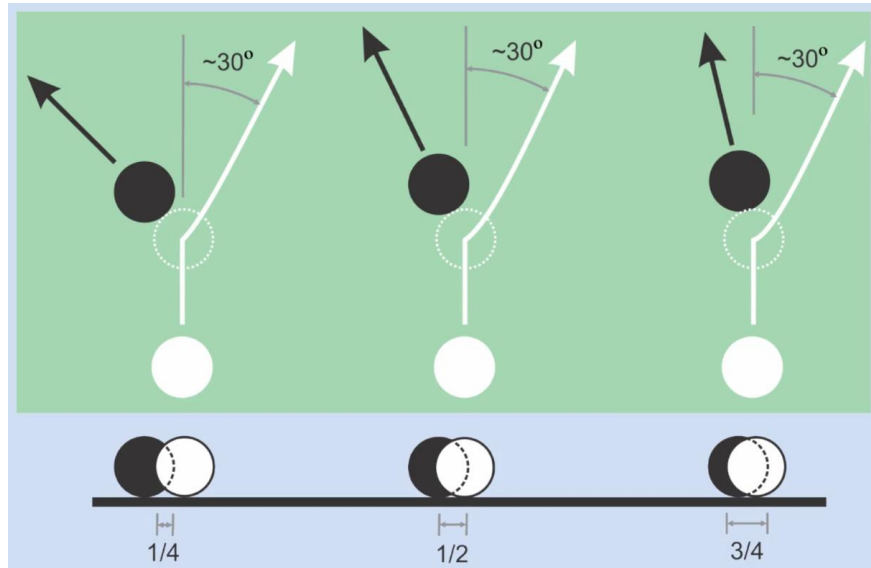
An important  $\frac{1}{2}$ -ball-hit principle is that the CB and OB separate at equal angles and equal speeds. You actually need to hit just a hair thinner than  $\frac{1}{2}$ -ball for this to work best. Again, the video demonstrates this and shows several game-situations where the technique is useful, especially in playing lock-up safeties.

## 4 – Natural Angle

One nice feature of a  $\frac{1}{2}$ -ball hit is the carom angle is very constant with small changes in cut angle. This makes it very easy to predict  $\frac{1}{2}$ -ball-hit carom direction in a wide range of game situations, as demonstrated in the video.

## 5 - 30° Rule

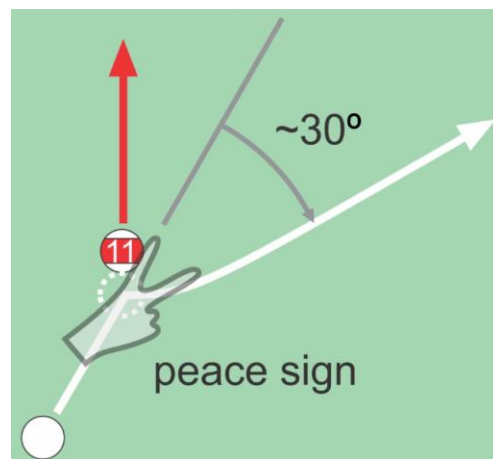
The most powerful ½-ball-hit principle is the 30° rule illustrated in **Image 2**. The rule states that a rolling-CB caroms off close to 30° over a wide range of cut angles between a ¼-ball and ¾-ball hit. Even though these three shots have radically different cut angles, the CB carom direction is very close to 30° for all three.



**Image 2** 30° rule

## 6 – Peace Sign

A peace sign can be very useful to accurately visualize the CB carom direction for a rolling-ball shot close to a ½-ball hit. As illustrated in **Image 3**, if you point one finger in the initial CB direction, the other finger will point in the final CB direction. The [angle template](#) linked in the YouTube video description can help you calibrate your peace sign. For most people, a firm but slightly relaxed peace sign forms an angle very close to 30°. Learn this angle first since it is a good average value over the entire ¼-ball to ¾-ball-hit range. And if you want to be more accurate predicting CB direction, also learn the slightly larger angle for the ½-ball hit and the slightly smaller angle for ¼-ball and ¾-ball hits.



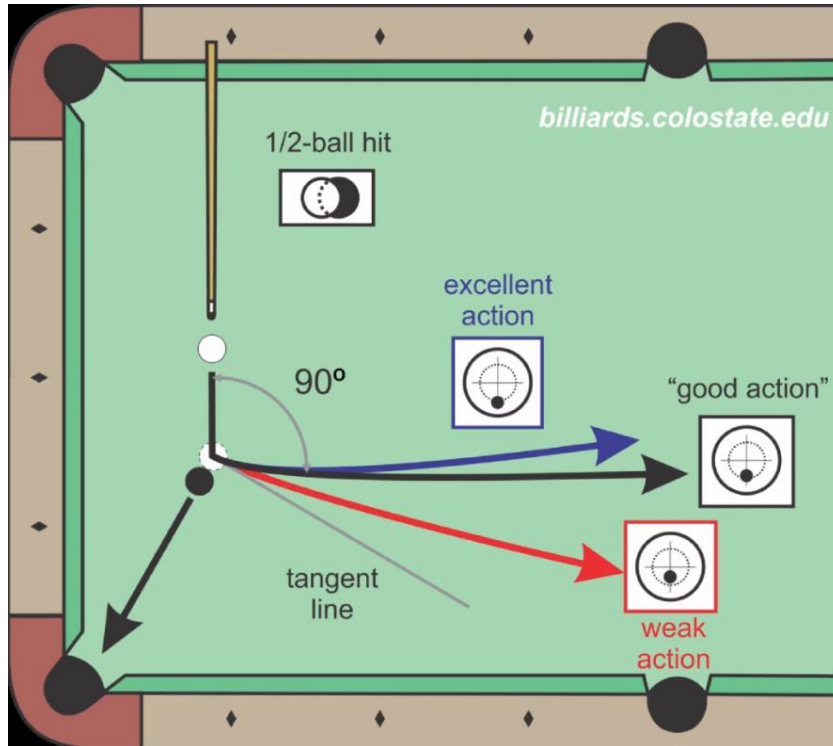
**Image 3** 30° rule peace sign

## 7 – Reliable Carom

As demonstrated in the video, being able to predict carom direction accurately is very useful in a wide variety of game situations including billiard and kiss shots, and safeties.

## 8 – Draw 90° Rule

There is also a useful-to-know ½-ball-hit principle for draw shots. As shown in **Image 4**, with “good action” draw, the CB will change direction by 90°. This is a result of the useful [3-times-the-angle system](#) linked in the YouTube video description. Because a ½-ball hit is a 30° cut angle, three times that is 90°. It is possible to draw slightly better than this, but it is not easy, so it is a good challenge drill.



**Image 4** Good action draw shot

## 9 – Safe Propositions

It is easy to come up with fun proposition shots that take advantage of the natural angle of the ½-ball hit. Bet somebody that with CB in hand, you can carom off a ball on the foot spot and scratch in the corner 10 times in a row. A potential “fish” might think this is difficult and take the bet. If you have a well-calibrated peace sign, the proposition bet is a sure thing. Just put the CB along the perfect line, where the natural angle heads straight to the heart of the pocket. Obviously, it is best to find this position and test it out before making the bet.

If nobody wants to take the first bet, move the OB to the center of the table and bet you can scratch from there 5 times in a row. Again, if you know where to put the CB, the bet is still a sure thing. And if your “fish” still demands more, bet you can scratch 3 times in a row, shooting with only 1 hand with the CB frozen to the head rail. Surely, no “fish” will think this is possible. Again, if you find the best CB position, even this bet is a sure thing. All three proposition bets are demonstrated in the video.

## 10 – Bank Double Kiss

A final useful principle with ½-ball hits concerns avoiding a double kiss with a bank of a rail-frozen ball. When the OB is a little more than a diamond from the target pocket, the bank is on the verge of a double kiss when shooting perpendicular to the rail with a ½-ball hit. At fast speed, the ½-ball-hit bank goes. But at slower speeds, there is a double kiss, causing a miss. This principle can help you figure out other shots too. For example, if the hit is fuller than ½-ball, the double kiss cannot be avoided, even at fast speed. With a thinner hit, you still need speed to avoid the double hit, but not as much as with the ½-ball hit. When the OB is higher up on the rail, the bank calls for a thinner hit, so the double kiss is less of a concern, but you still need enough speed to enable the OB to compress the cushion enough to clear. Even higher up the rail, the OB can clear even at slow speed.

Again, everything is demonstrated in detail in online video [NV L.39](#), where the ten useful principles are applied to a wide range of interesting game-situation examples. I hope you now have a better appreciation for the importance and usefulness of the ½-ball hit. Hopefully, some of the principles will help you win more games ... and bets!

Good luck with your game,  
Dr. Dave



[NV L.39](#) – 10 Reasons Why the HALF-BALL HIT is so Important

PS:

- I know other authors and I tend to use lots of terminology, and I know not all readers are totally familiar with these terms. If you ever come across a word or phrase you do not fully understand, please refer to the [online glossary](#) at [billiards.colostate.edu](http://billiards.colostate.edu).

*Dr. Dave is a PBI Master Instructor, Dean of the Billiard University, and author of the book: [The Illustrated Principles of Pool and Billiards](#) and numerous instructional DVD series, all available at: [DrDaveBilliards.com](http://DrDaveBilliards.com).*