
Supporting narrated video (NV) demonstrations, high-speed video (HSV) clips, 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 articles help you locate the resources on the website.

I have written a lot about the 30° rule over the years. It states that a rolling cue ball (CB) deflects off an object ball (OB) at close to a 30° angle over a wide range of shots between a ¼-ball and ¾-ball hit. And since a firm but relaxed peace sign forms close to 30° for most people, you can use your fingers to easily predict CB direction for rolling-CB shots. If you point one finger in the initial CB direction, the other finger will point in the direction the CB will head after hitting the OB. People who play competitively at a high level intuitively know the natural angle and how it varies with cut angle. They also know the effects of speed on the CB trajectory. But for the mere mortals among us who don't have perfect intuition, the peace sign can be a useful tool. This article looks at subtleties of how to modify the peace-sign technique to be more accurate over a wide range of shots and situations. Before continuing, if you are not yet familiar with the 30° rule and Dr. Dave peace-sign technique, refer to the “[30° rule](#)” resource page in the FAQ section at billiards.colostate.edu. I consider the 30° rule the most useful principle of pool.

Diagram 1 shows how the basic 30° rule peace sign is applied at the table for ½-ball-hit shot. The aim for a ½-ball hit is sometimes referred to as center-to-edge (CTE) since the center of the CB is aimed exactly through the outer edge of the OB. As illustrated in the diagram, with the index finger pointing in the initial CB direction, the middle finger predicts the final CB direction. Actually, the direction will be slightly wider than the 30° prediction since the CB deflection angle is largest close to a ½-ball hit. I adjust for this by stretching my peace sign a little when a shot is close to a ½-ball hit. A [peace-sign template](#) is available on the “[30° rule](#)” resource page to help you calibrate your fingers for accurate visualization of a wide range of shots.

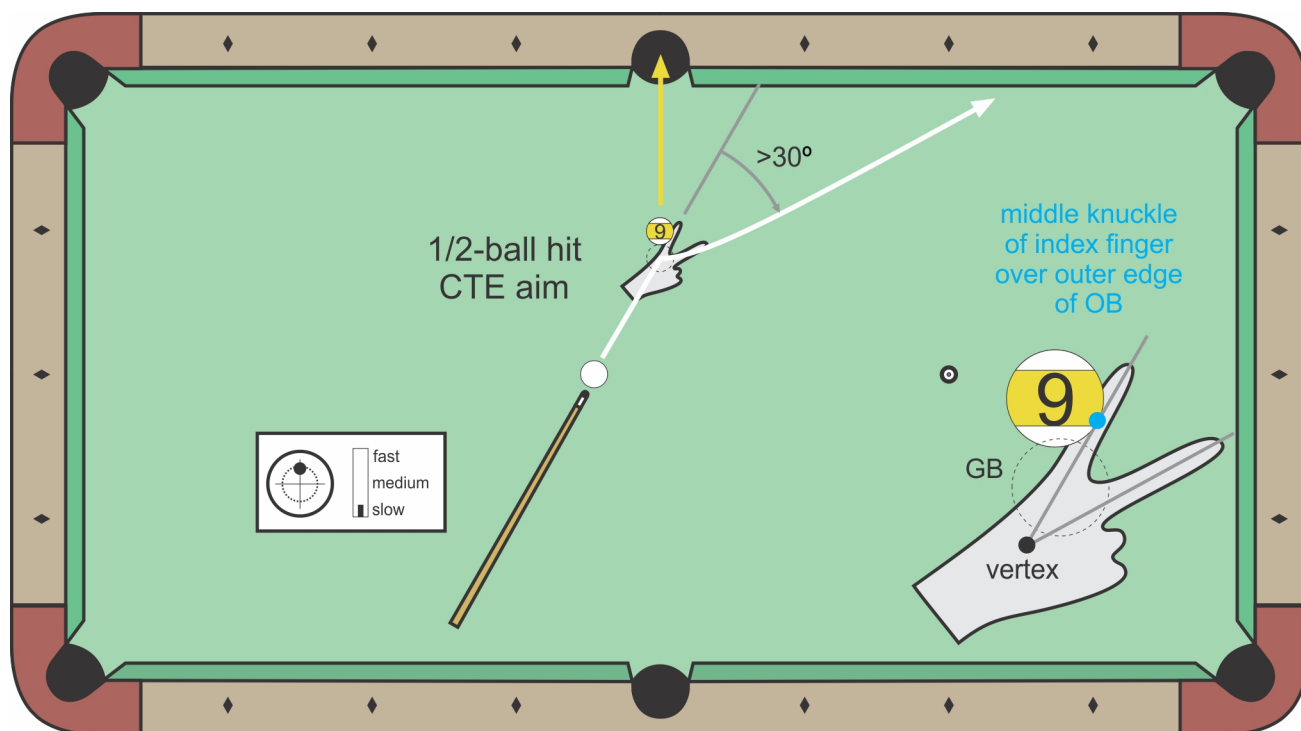


Diagram 1 30° rule peace-sign technique

The enlarged view in the bottom-right portion of Diagram 1 shows where the peace sign should be placed to get the best prediction for the final CB direction with a slow-speed ½-ball-hit shot. The middle knuckle of the index finger is placed right over the outer edge of the OB. Notice that this places the vertex of the 30°

angle slightly back from the center of the ghost-ball (GB) position of the CB. This effectively offsets the predicted CB direction a little to account for the slight shift in CB path that occurs as the CB curves forward from the tangent-line direction.

Diagram 2 shows the effect shot speed has on CB path. It also shows how to modify the peace-sign technique to account for this. With more speed, it takes longer for the CB to curve forward from the tangent line. Notice how the final CB path angle is still the same for each shot. The only difference is a parallel shift in the tangent-line direction. To visualize the shifted path, I slide my peace sign down the tangent line based on shot speed. At slow speed, I place the index finger right over the outer edge of the OB (see the black hand). At medium speed, I shift the peace sign about ½ a diamond down the tangent line (see the red hand). And at fast speed, I shift it about 1 diamond (see the blue hand). The required shift amount obviously depends on conditions and exact shot speed; but with a little practice, you can develop a feel for this.

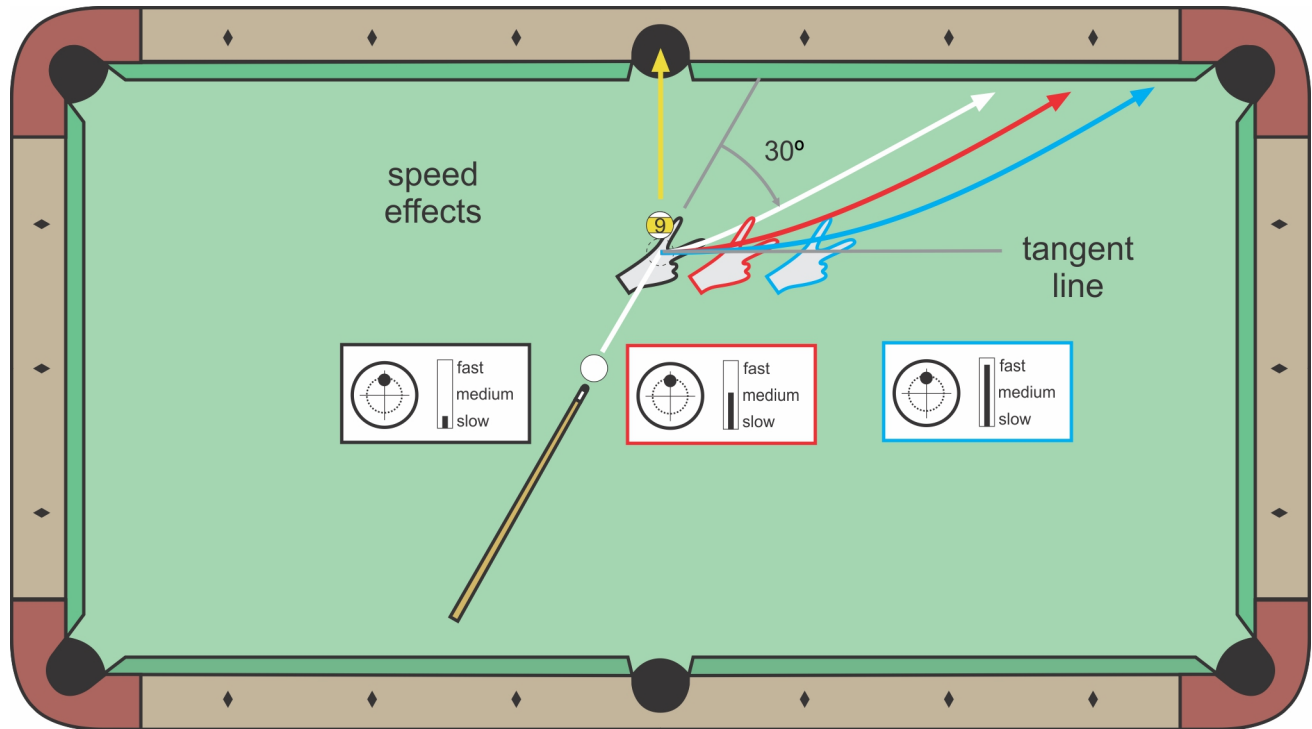


Diagram 2 30° rule speed effects

Diagram 3 shows how to adjust placement of your peace sign for shots of different cut angles. The index finger points in the initial CB direction; so with a ¼-ball hit (see Diagram 3a), the knuckle of the index finger will be outside the edge of the OB. And with a ¾-ball-hit (see Diagram 3c), the knuckle will be inside the edge of the OB. If you want to be accurate in your predicted CB direction, you need to be careful where you place your finger relative to the OB edge for different cut angles. Also, remember that the CB deflection angle is greatest (about 34°) for a ½-ball hit, and is less (about 27°) for ¼-ball and ¾-ball hits. 30° is a good average value to use over a wide range of shots; but if you want to be more accurate, you need to account for the slight differences. So with shots close to a ½-ball hit, you should stretch your peace sign a little to account for the slightly larger angle. In Diagram 3b, you can see that the final CB path heads a little wide of where the standard 30° peace-sign middle finger is pointing. Again, you can easily account for this just by spreading the fingers a little wider than normal. In Diagrams 3a and 3c, notice that the CB path heads slightly inside of the middle-finger direction. You can account for this by relaxing your peace sign a little when the hit is a little full or thin. Again, the [peace-sign template](#) available on the “30° rule” resource page can be useful to help you practice the angles.

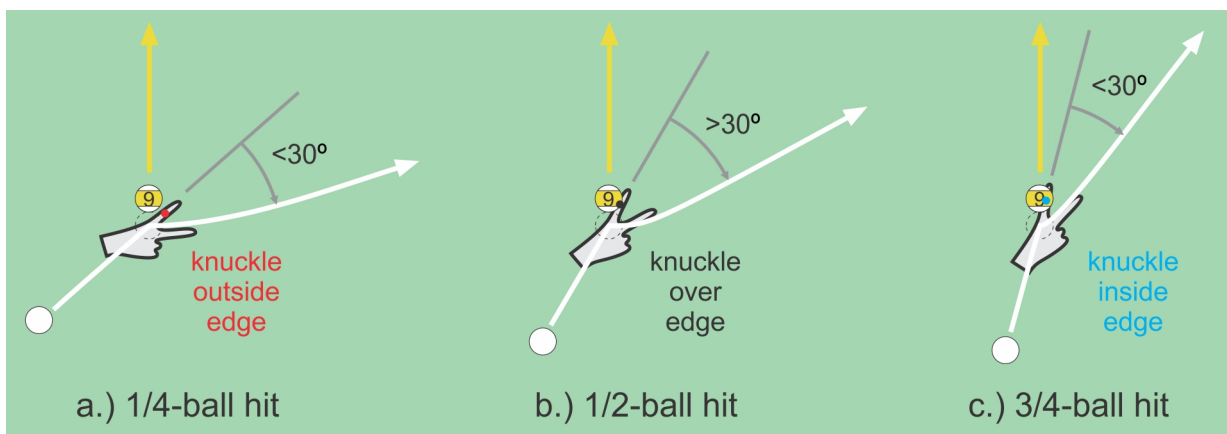


Diagram 3 Peace-sign placement for different cut angles

Diagram 4 shows how to adjust the placement of your peace sign based on the size of your hands. If you very small hands (see Diagram 4a), you will need to place the middle knuckle of your index finger in front of the OB edge some. And if you have very large hands (see Diagram 4b), you will need to place your knuckle beyond the OB edge some. In both cases, the vertex point and predicted final CB direction are the same. The best way to figure out where to place your hand is with practice.

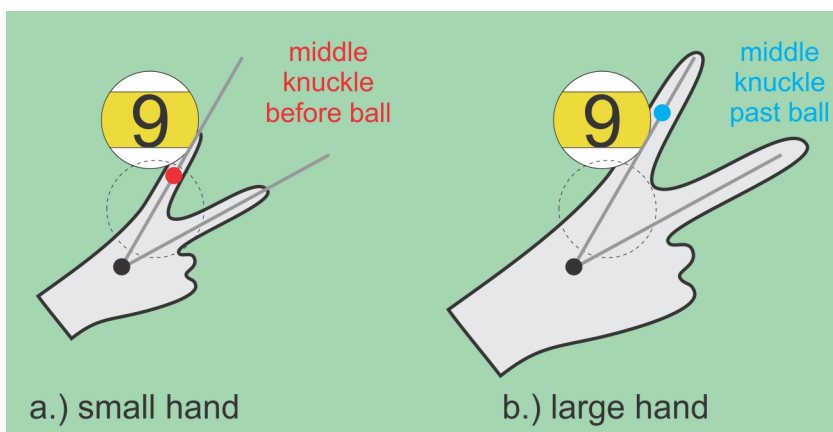


Diagram 4 Peace-sign placement for different hand sizes

I hope this article helps you more-accurately apply the Dr. Dave peace-sign technique to visualize where “whitey” will head over a wide range of rolling-CB shots. This is a very important skill in detecting and avoiding scratches, planning break-out and avoidance shots, working your way through “traffic,” and planning position for your next shot.

Good luck with your game,
Dr. Dave

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 don't fully understand, please refer to the [online glossary](http://billiards.colostate.edu) at billiards.colostate.edu.

Dr. Dave is a PBIA Advanced Instructor and author of [The Illustrated Principles of Pool and Billiards](#) book and DVD, the Video Encyclopedias of [Pool Shots \(VEPS\)](#), [Pool Practice \(VEPP\)](#), and [Eight](#)

[Ball \(VEEB\)](#), and the [How to Aim Pool Shots \(HAPS\)](#) and [Billiard University \(BU\)](#) instructional DVD series, all available at: DrDaveBilliards.com.