

« Diamond System » - THE Universal System

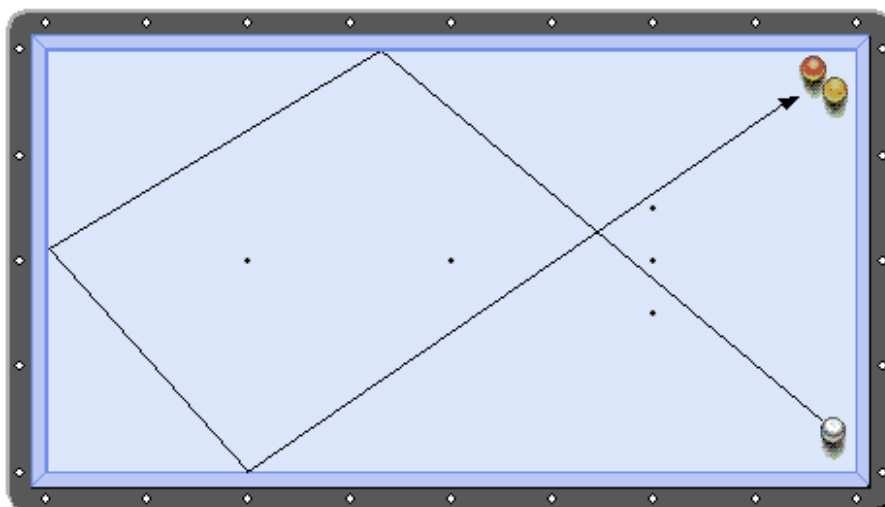
Execution characteristics

Height on cue ball:	On the equator
Spin :	Maximum running side pin
Stick position :	As level as possible

The basic diamond system

As a matter of fact, this system is considered to be the universal method for carom billiard.

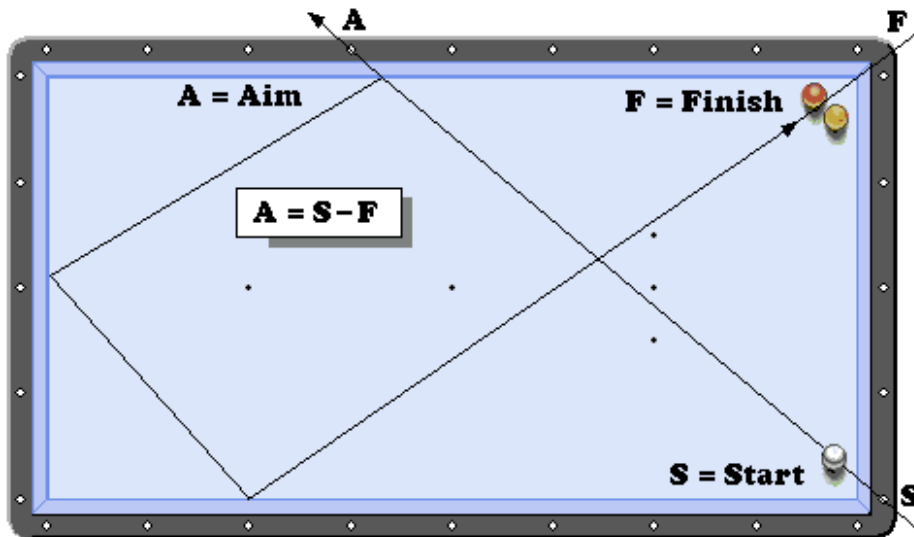
It's a common fact that in a game of Carom Billiard more than 1/3 of the points will be made with the help of this technique. The shots shown below are just a few examples of the points that can be accomplish with this method.



Although the formula is quite simple to memorize, the position markers are much harder to remember, the values carried over on the table being different for the 3 parameters (A, S, F).

$$\text{Aim} = \text{Start} - \text{Finish}$$

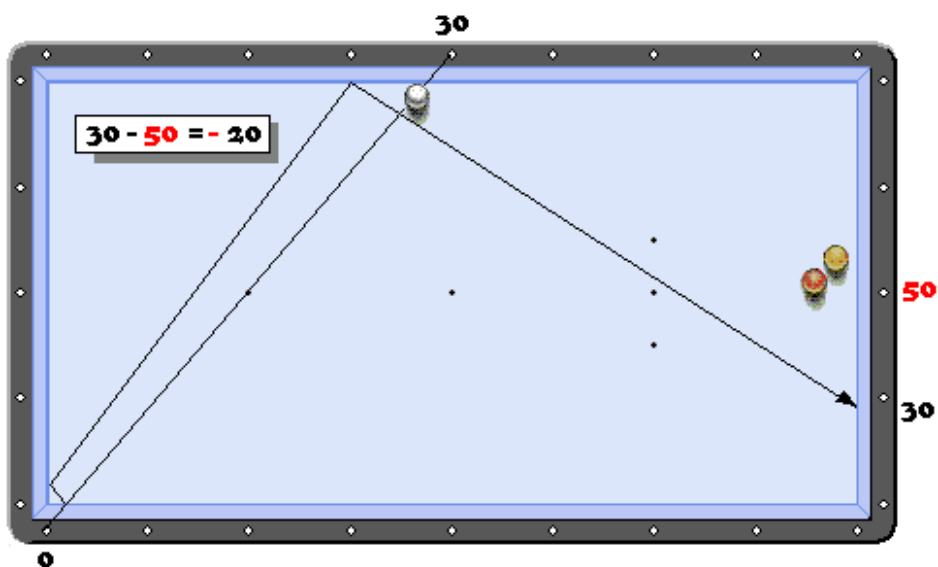
If you have difficulties remembering all the diamond system parameters, for now I suggest you use this method for shots where the Finish point is between 0 and 40 and the start point between 35 and 60. When you feel comfortable with these parameters, go on with the entire set of numbers.



Efficiency limits

This method is efficient for shots played “Long rail- Short rail” when the Start value is higher than the finish value. It’s not possible to apply this method when the player’s ball is below the 20 marker (2nd diamond on the long rail). Be patient... there is another method for shots below the 20 marker.

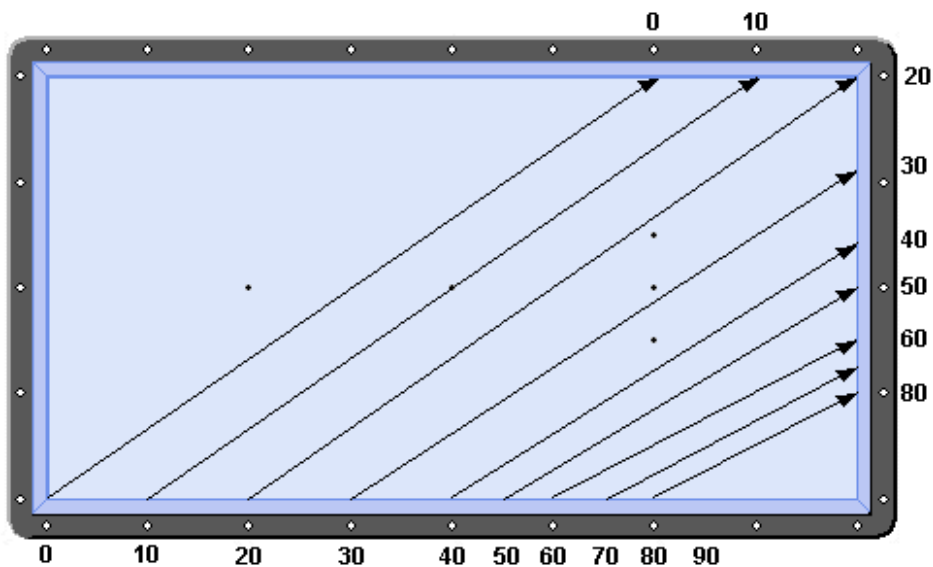
In the diagram below, Start is at 30 and finish is at 50, which means it’s impossible to accomplish this shot with this method. At best, one could reach the finish point 30 while using the aiming point 0.



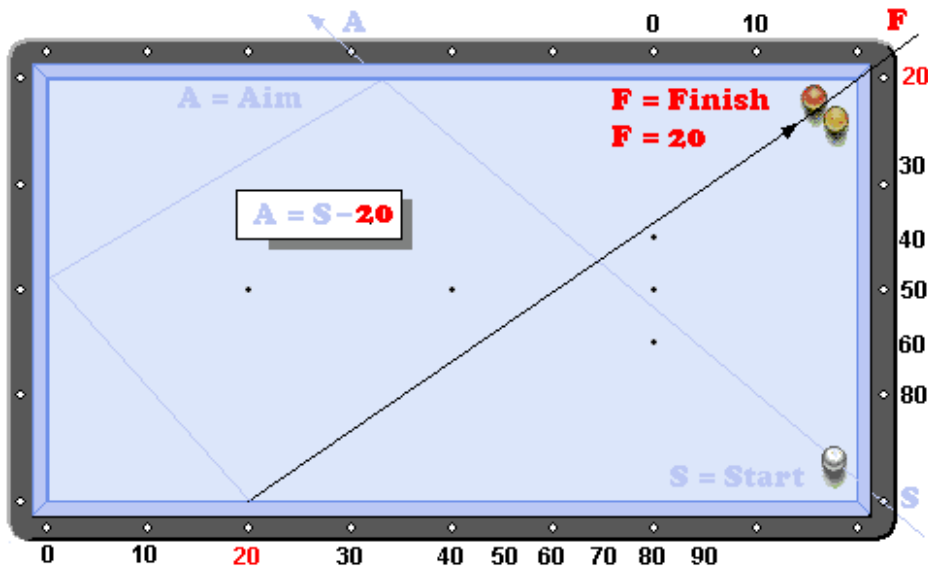
Step 1: finding the finish point

You must keep in mind the finish lines as they are described in the table below. The markers are located on the rail in front of the corresponding diamond. Note: between the 40 and 90 marker on the long rail, each set of 10 corresponds to $\frac{1}{2}$ a diamond.

Value	Marker on the long rail	finish
0	Diamond 0 (corner)	Facing to the 6th diamond on the long rail
10	Facing to the 1st diamond	Facing to the 7th diamond on the long rail.
20	Facing to the 2nd diamond	8th diamond (corner)
30	Facing to the 3rd diamond	5 cm right of the 1st diamond on the short rail
40	Facing to the 4th diamond	Between 1st and 2nd diamond on the short rail
50	Between 4th and 5th diamond	Facing the short rail's central diamond
60	Facing to the 5th diamond	Between 2nd and 3rd diamond on the short rail
70	Between 5th and 6th diamond	5cm right of the 3rd diamond on the short rail
80	Facing to the 6th diamond	facing the 3rd diamond on the short rail



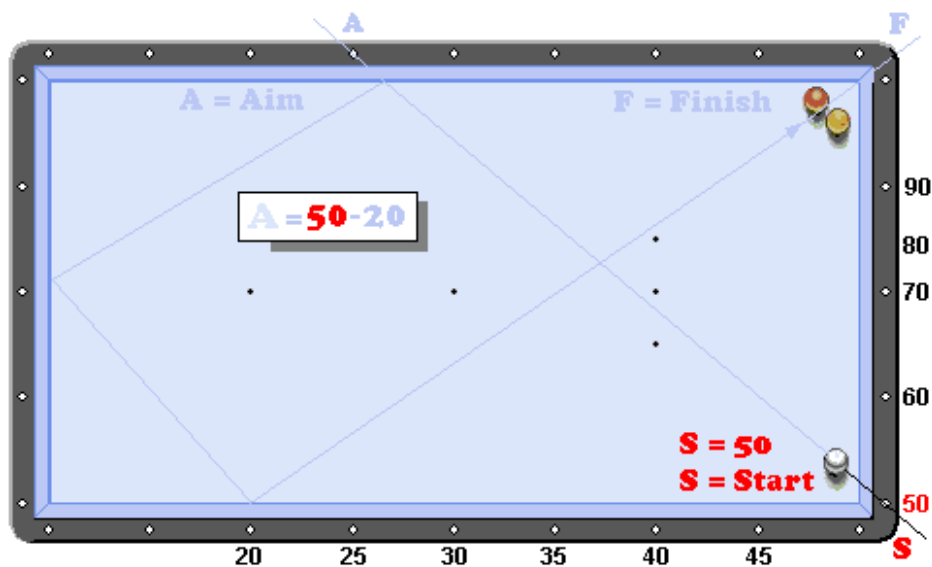
In this diagram, the finish value is 20. It must come to the attention that each point located on this line is the equivalent of a 20 finish point. There is no difference in calculation between the diagram above and the one below.



Step 2: finding the Start point

The start value is given in the table below.

LONG RAIL	
Value	located on the long rail
20	2nd diamond
25	3rd diamond
30	4th diamond
35	5th diamond
40	6th diamond
45	7th diamond
SHORT RAIL	
Value	located on the short rail
50	Diamond 0 (corner)
60	1st diamond
70	2nd diamond
80	Between 2nd and 3rd diamond
90	3rd diamond



In this diagram the start value is 50.

Step 3 : Visualize the cue ball position numbers

It's now time to apply the magic formula: Aim = Start- Finish ($A = S - F$)

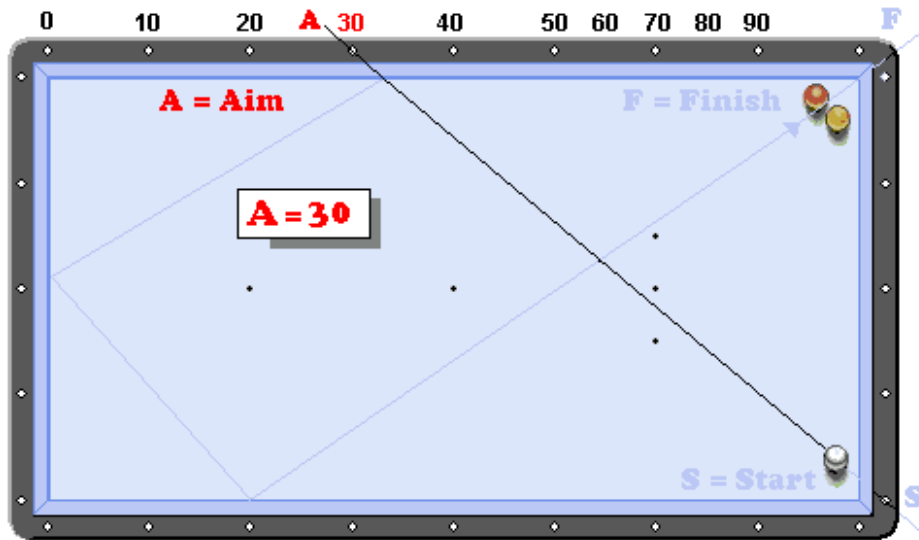
$$\text{Cue ball position number} = 50 - 20$$

$$\text{Cue ball position number} = 30$$

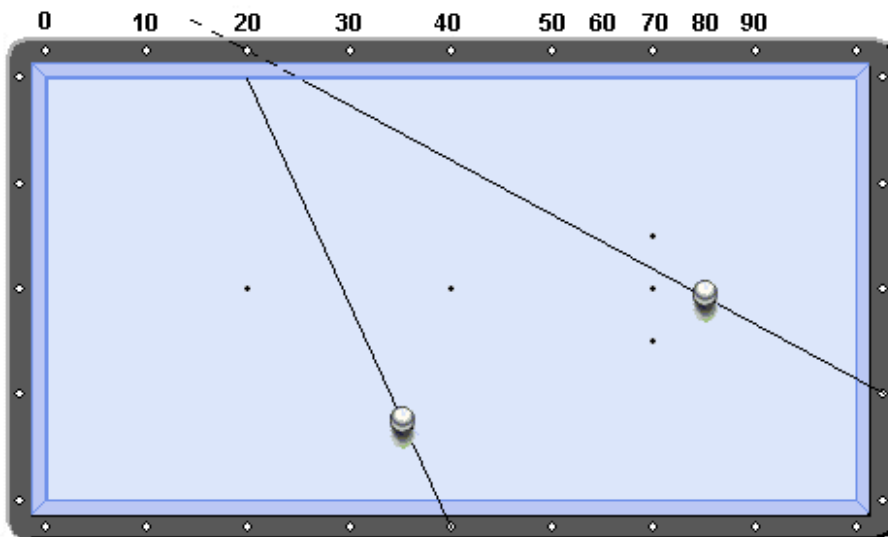
The point of aim 30 is given according to the table below.

Note: between the 50 and 90 marker on the long rail, each set of 10 corresponds to $\frac{1}{2}$ a diamond.

Value	Located on the long rail
0	diamond 0 (corner)
10	1st diamond
20	2nd diamond
30	3rd diamond
40	4th diamond
50	5th diamond
60	Between 5th and 6th diamond
70	6th diamond
80	Between 6th and 7th diamond
90	7th diamond

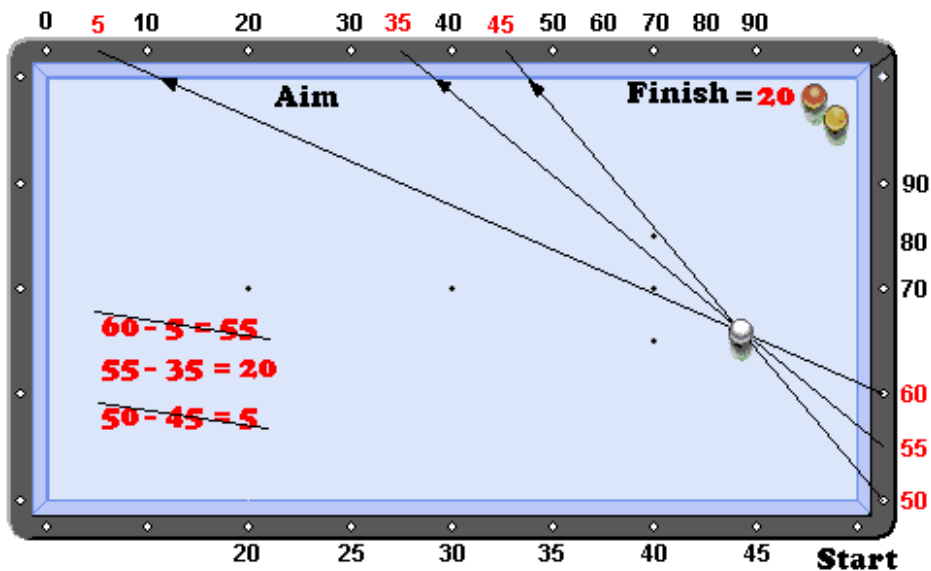


Note: If the starting point is on the short rail (equal or higher than 50), aim must be done through the rail (aim at the diamond). If it starts on the long rail (lower than 50), aim must be in front of the rail (facing the diamond). In both cases below, the aiming point value is 20.

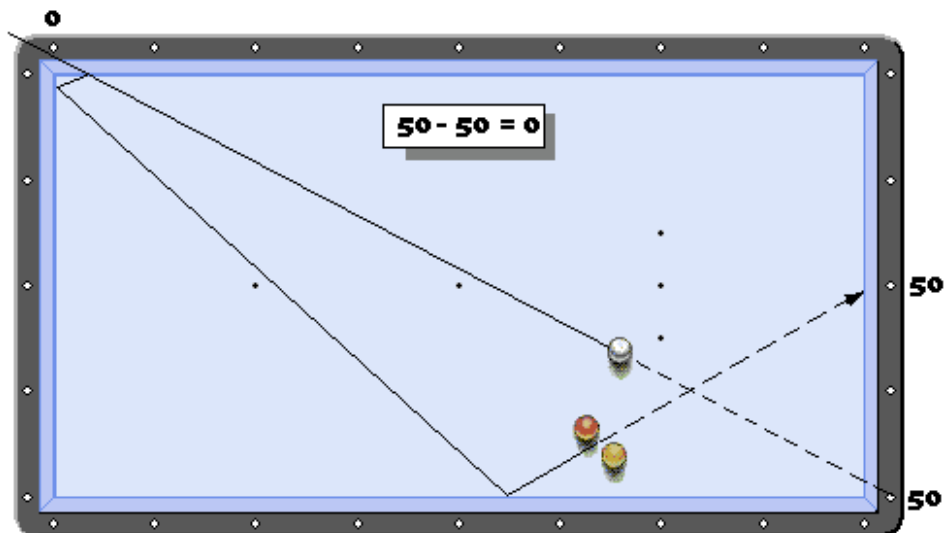


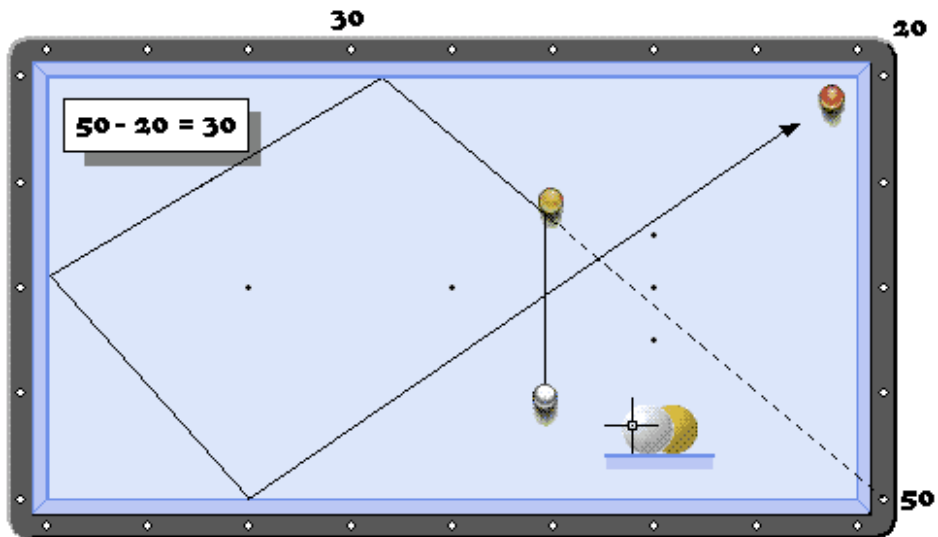
The ball number 1 is not along the rail

If ball number 1 is not along the rail, pivot your cue while using your ball's axis as pivot point until you reach the right application of the formula: Aim = start - finish



Other examples of the diamond system

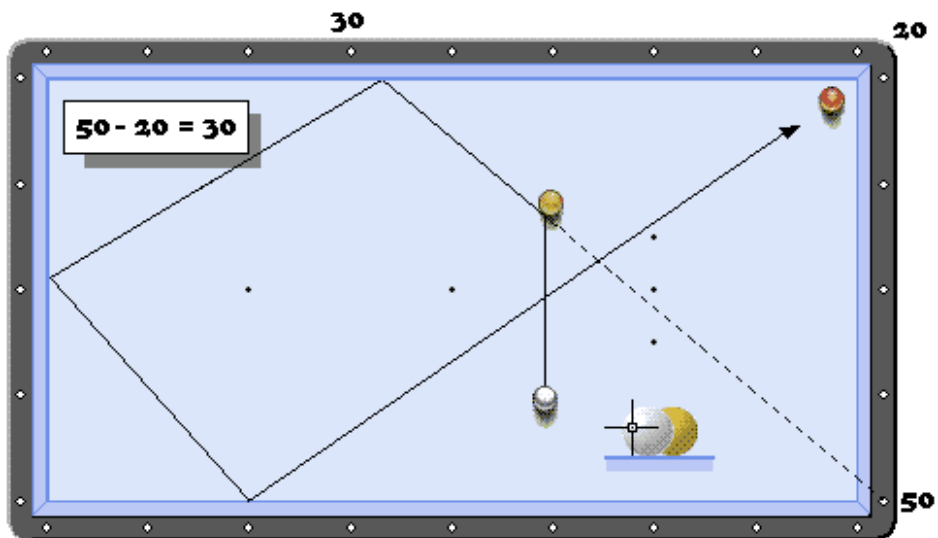


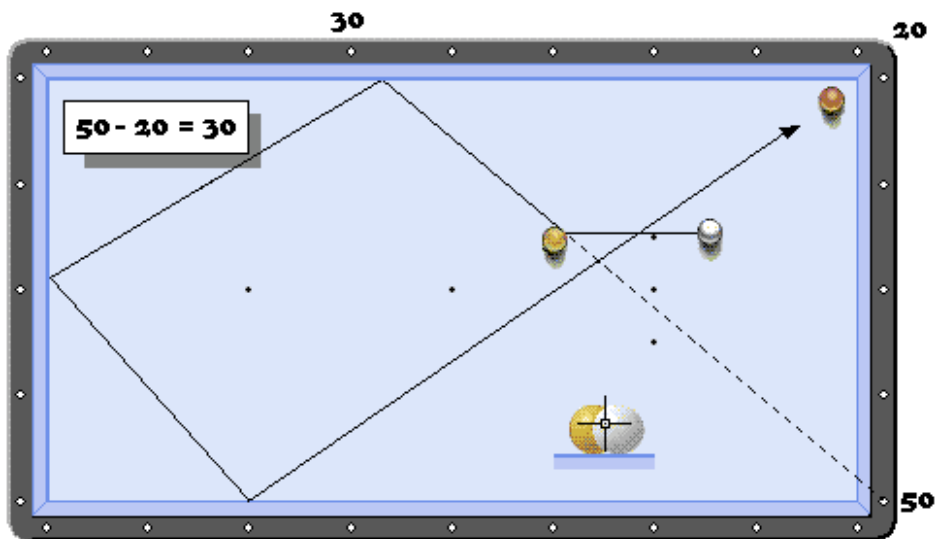


Extent of this method to the « natural » points

This system can be applied to those points called “natural”. In order to find the point of aim (or the point of impact on the first rail), one must use the pivot method to find the right pair Aim/Start corresponding to the formula. This time, the pivot will be ball number 2 and the pivot line will be the ball’s tangent and not its axis. You will then need to find the corresponding ball in order to reach the aiming point obtained. The two examples below show how to obtain the same aiming point with different number 1 ball positions.

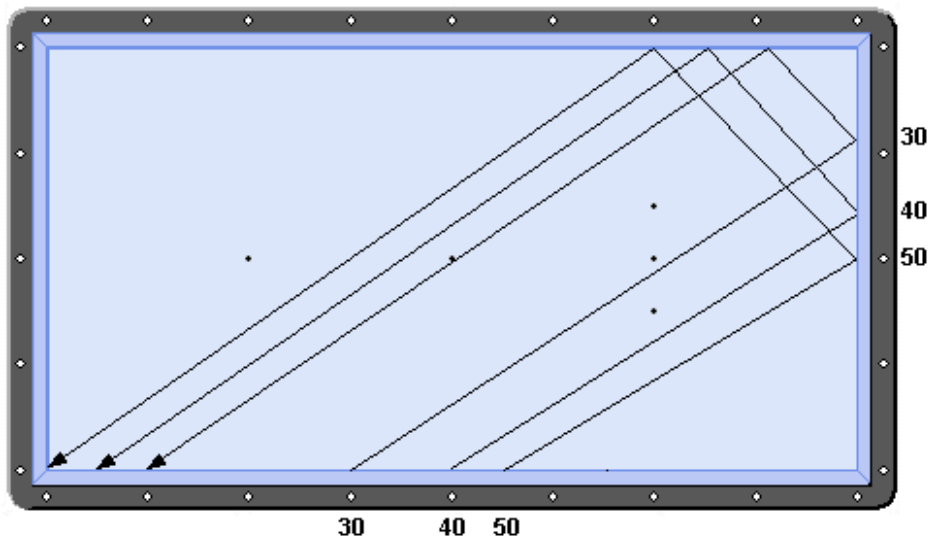
Les deux exemples ci-dessous vous montre comment on obtient le même point de visée à partir d’une position de bille N°1 différente.





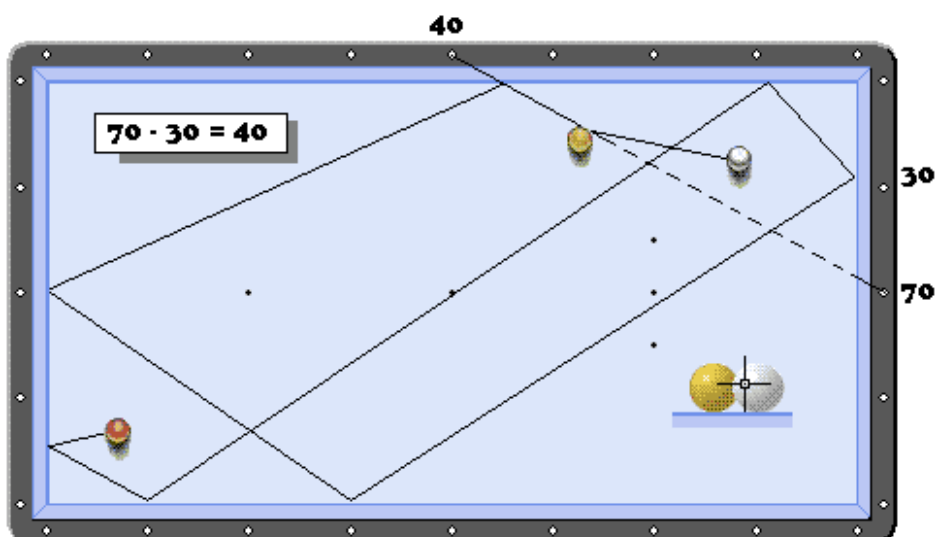
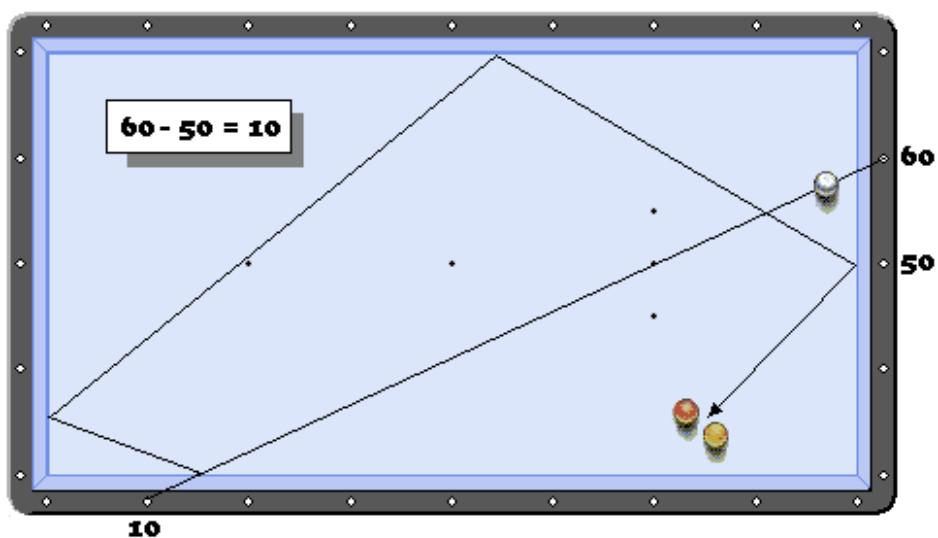
Extent of this method for 4 or 5 rails

The diagram below gives the path of ball number 1 after the 4th and 5th rail with a 30, 40 and 50 start point.

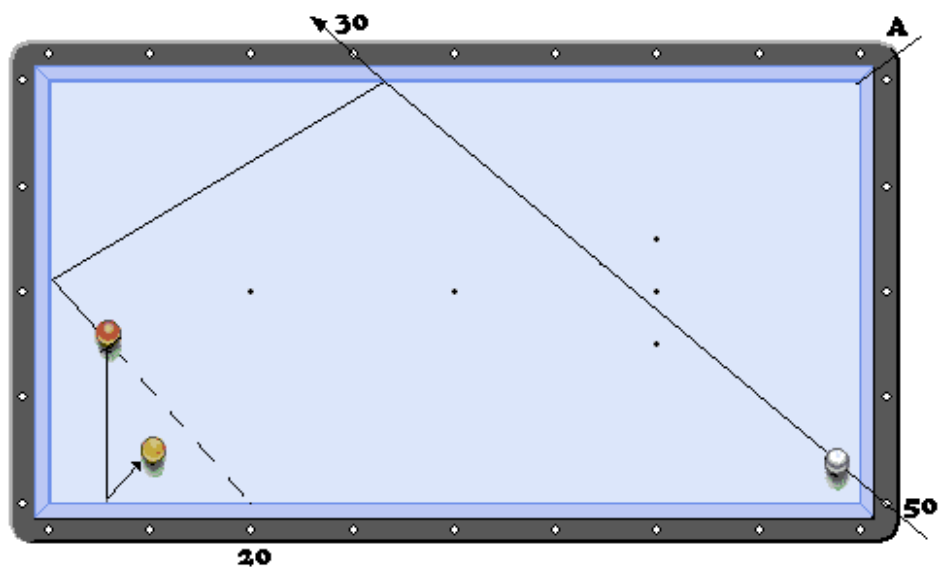


Third rail value (on the short rail)	4 th rail (on the long rail)	5 th rail (on the front long rail)
30	7 th diamond	1 st diamond
40	Between 6 th and 7 th diamond	Between 1 st and 2 nd
50	6 th diamond	At the corner of the short rail

Extend formula to realize these spot shots



That's it ! And to show you that this method is valid for various points, here's how to calculate the famous "umbrella" point (but be careful it's still a hard shot to accomplish)



These translation of the Diamond System (French to English) is realised by Eric PERREAULT from "Be good at Billiards" and Thierry LAYANI from "Layani Cues". Many thanks to them for their contributions.

