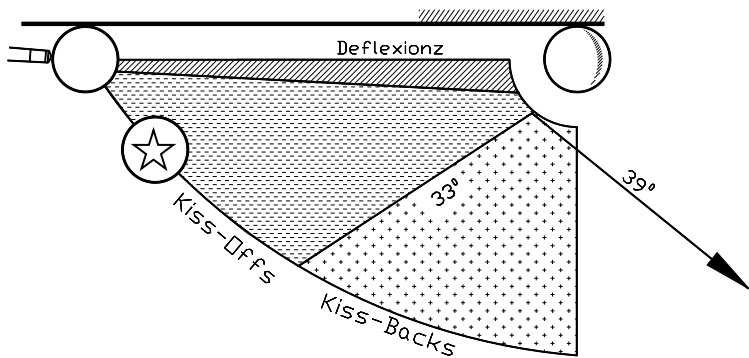


KISSOFFS

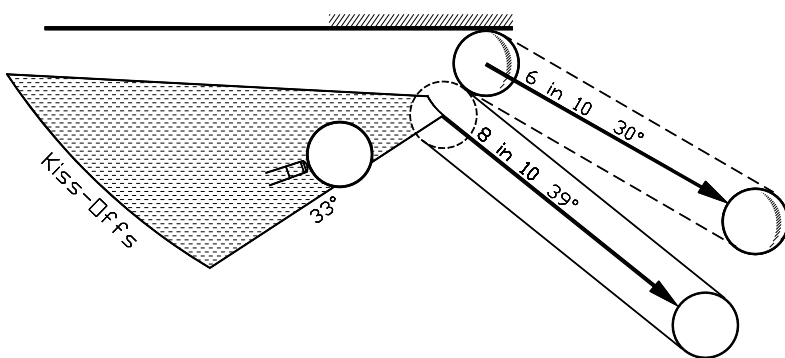


KISSOFF 1 The Deflexion Angles mentioned in the previous chapter apply if there iz no double-kiss. If the yellow iz frozen or nearly then any double-kiss will giv the qball a wider deflexion angle. Double-kisses are not possible when the qball iz very near the cushion & near the yellow, ie in the **DEFLEXIONS ZONE**, from within this zone u always get a standard Deflexion Angle.

If the qball iz in that zone u neednt fear a double-kiss just play yor normal shot az if the cush did not exiss.

Az we all know, the deflexion angle depends on the thickness of the contact. From within the Deflexions Zone a half-ball contact would giv the qball a trajectory az wide az the arrow. The drawing shows the qball at the limit of the zone, ie 6 balls clear of yellow, further away than 6 balls & u will get some double kiss effect. If the qball iz in the **KISSOFFS ZONE** then a double-kiss iz possible (depending on contact & pace). A definite double-kiss will allways giv the qball a trajectory of near'nuff 39° (arrow) for slowish strokes. U will get a definite double-kiss if the contact iz thicker than ¼ ball & thinner than 5/8th ball. This zone iz the subject for this chapter. Actually, the qball (☆) iz drawn at the pozy where there iz a slight **ANOMALY**. On about this attack-angle u can get a KissOff angle slightly wider than the 39° arrow. But praps this anomaly depends on the nature of the balls & cushion. Don't forget we are talking about slowish shots, & fullish kisses, & zero sidespin & zero stun.

KISSBACKS ZONE If the qball lies in the KissBacks Zone, it iz possible to get a kissback angle wider than the 39° arrow (see next chapter).



KISSOFF 2 If the **QBALL** iz attacking from within the KissOffs Zone, contacting the yellow thicker than ¼ ball & thinner than 5/8 ball givs a 39° KissOff angle for the qball, for slowish pace. Uzing lhs (check-side) makes **ZERO** difference to the KissOff angle. Right-hand-side (running-side) increases the KissOff angle a bit. Moving the yellow a little (or a lot) **OFF** the cushion makes little difference to the 39°. Az long az the double kiss iz definite.

Az shown, the **YELLOW'S** kissy rebound **ANGLE** iz always near'nuff 30°. Check-side decreases it very little, running-side increases it a bit. U get this 30° kissy rebound-angle for any attack-angle up to say 120°, ie from inside the kissback zone & from beyond the kissback zone. Az long az the double-kiss iz a full one, the yellow's kissy rebound angle iz always 30° near'nuff. If the yellow iz progressively moved away from the cushion, the yellow's rebound angle progressively lessens, it kan fall to less than 20°. If the yellow iz hit much thicker than half-ball, it runs ahead of the qball, if the yellow iz hit ½ ball, it's a dead heat, less than ½ ball the yellow trails behind. The contact on yellow only affects the **PACE** of the yellow, ie whether the yellow runs ahead or trails behind the qball. The qball KissOff angle & the yellow kissy rebound angle are fixed in concrete, unless u uze some stun, or piqué. This inflexibility iz good & bad, at least u know what iz going to happen, & what karnt happen. If u widen the qball KissOff angle uzing stun or **PIQUÉ**, the yellow kissy rebound

angle also widens, but u will never get it to exceed say 45°. Contrary to what books say, u neednt use **SIDESPIN** to moov the yellow along or to leev it behind. Any arrangement of the 3 balls that u kan get with check-side or running-side u kan get with zero side, try it, u will be amazed. Uze your favourit sidespin if u wish, but don't think that u havta, not in the KissOff zone.

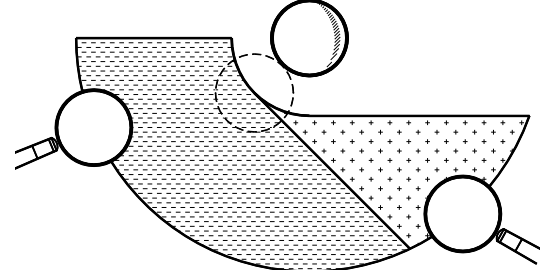
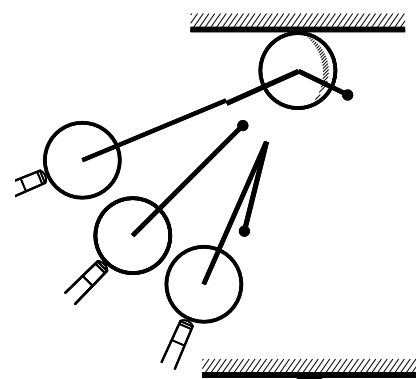
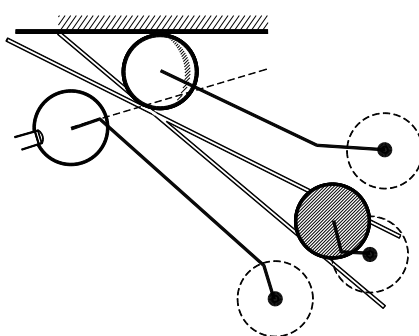
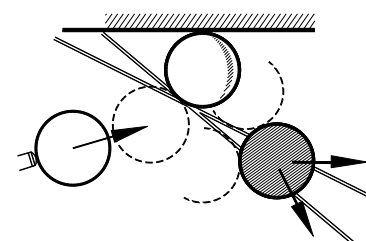
KISSBACKS For attack-angles larger than 33°, in the kissback zone, u will naturally get (or kan get) bigger double-kiss effects. Lhs & rhs will now hav a drastic effect on the qball's KissOff angles, az will stun or screw. But stun/screw/side won't affect the yellow's kissy rebound angle (for a definite double-kiss). Anyhow, this iz explored in the next chapter. Anyhow, why not chalk a couple of lines on your home table, az follows, based on the actual qball's KissOff angle & the yellow's kissy rebound angle that u find on your own balls & table, & experiment to your heart's content. Here are some more items.

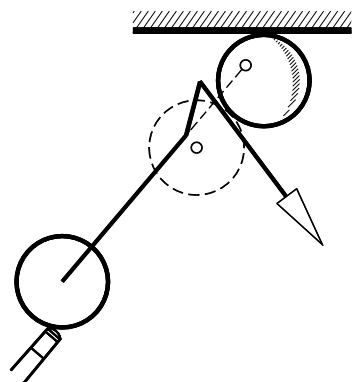
KISSOFF 3 Here a half-ball contact on yellow will result in the qball & yellow having a dead heat in the **RACE** to the red. Now, u don't want the yellow to win (uzually), koz it bumps red away from the cushion (see arrow). The qball bumps the red parallel to the cushion (see arrow) which iz ok, so make sure that the qball **WINS** the race by here contacting yellow thinner than half-ball, say 7/16ths. For other qball attack-angles the contact would need to be thicker or thinner for the qball to just win the race. Attack angles & contacts are az follows. 0° (6/16ths), 20° (az shown here 7/16ths), 30° (8/16ths), 40° (9/16ths), 50° (11/16ths). Anyhow, there iz a race between the qball & the yellow in every such kiss-cannon, & the player iz always judging the shot so that the race result iz a good one. It's one of those things that we hardly think about, but the race iz just az important az the angles that we do think & worry about.

KISSOFF 4 Here your **CHALKLINE** for a KissOff angle shows that u will land very thinly on red. Therefore, u should land softly to reduce the risk of the qball stopping behind the red & thusly getting a cover. And u also havta judge the contact on yellow to leev it behind, thusly to help prevent a cover. Here a half-ball contact on yellow will do the job. But this iz not the stroke that i hav drawn here in 4. The shot i hav drawn here iz praps more certain of scoring, but might not leed to nurserys. U contact the yellow a thick half-ball to drive it ahead so that it bumps red into the path of the qball, az shown. Uze az much top az u kan. I uze this trick lots.

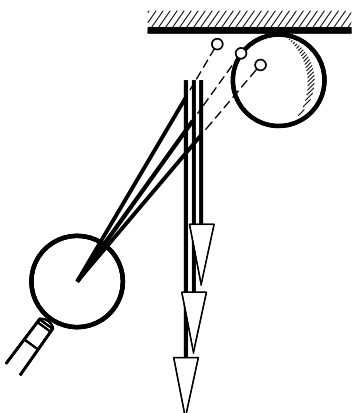
KISSOFF 5 This shows what happens if u hit the yellow dead center. If the attack line iz less than 45°, the qball will **FOLLOW** throo, az shown. On the 45° line, the qball gets a double-kiss, & stops **DEAD**. This iz for slowish shots. If the attack line iz more than 45°, the qball kisses back. The kissback iz shown on a line a little right of the attack line (due to friction).

KISSOFF 6 The interesting thing iz that contacting the yellow left of the 45° contact point will **NOT** result in a double-kiss. And any contact right of the 45° contact point will not be able to avoid a double-kiss (unless very thin, or thin & very fast.). This all means that it iz virtually impossible to avoid a double-kiss if the qball lies in the cross-hatch zone. This iz koz u karnt "see" the 45° contact point. In the broken-hatch zone, a kiss-less impact iz possible, depending on your aim-line (ie depending on the contact point), az already mentioned.



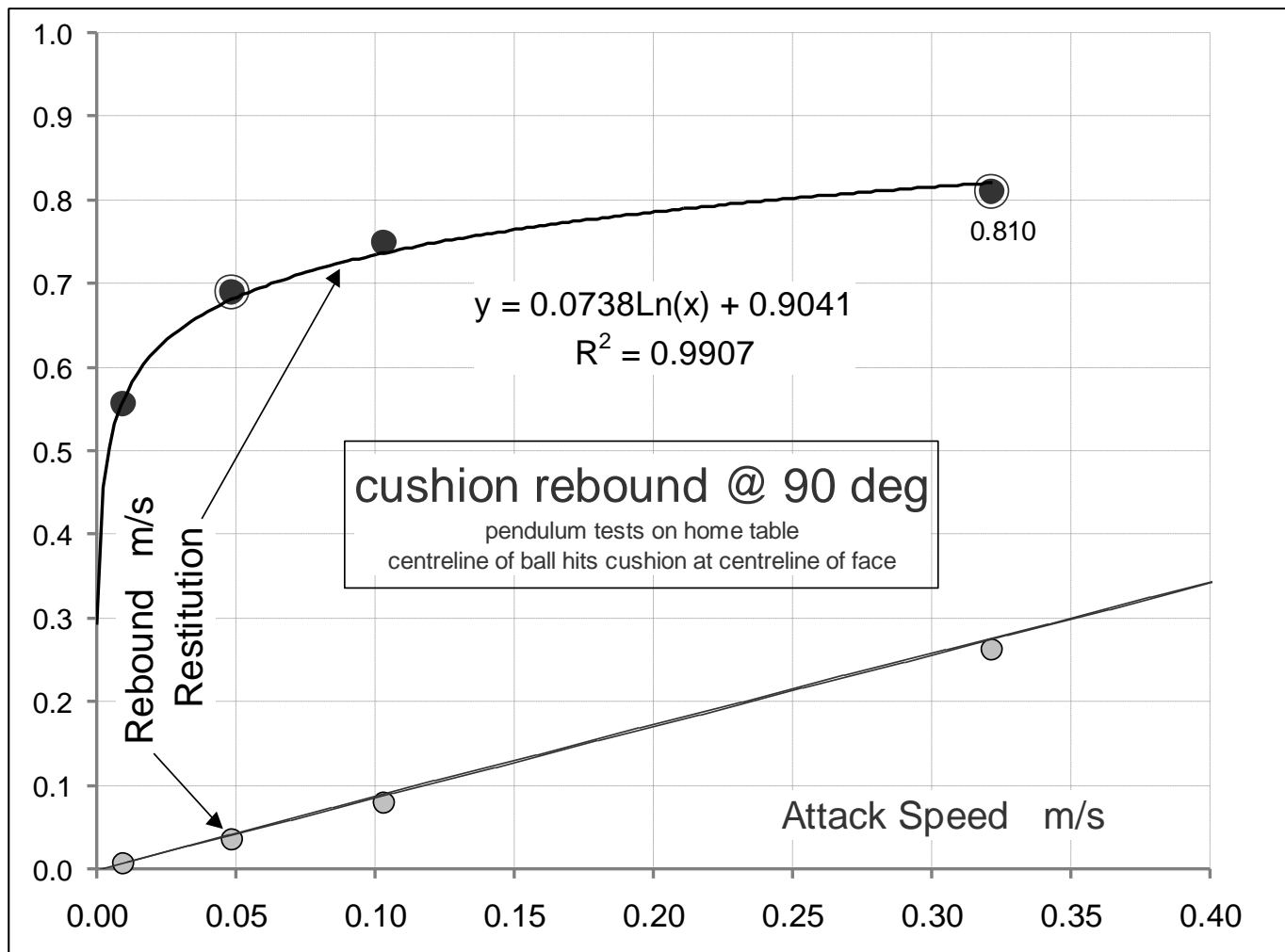


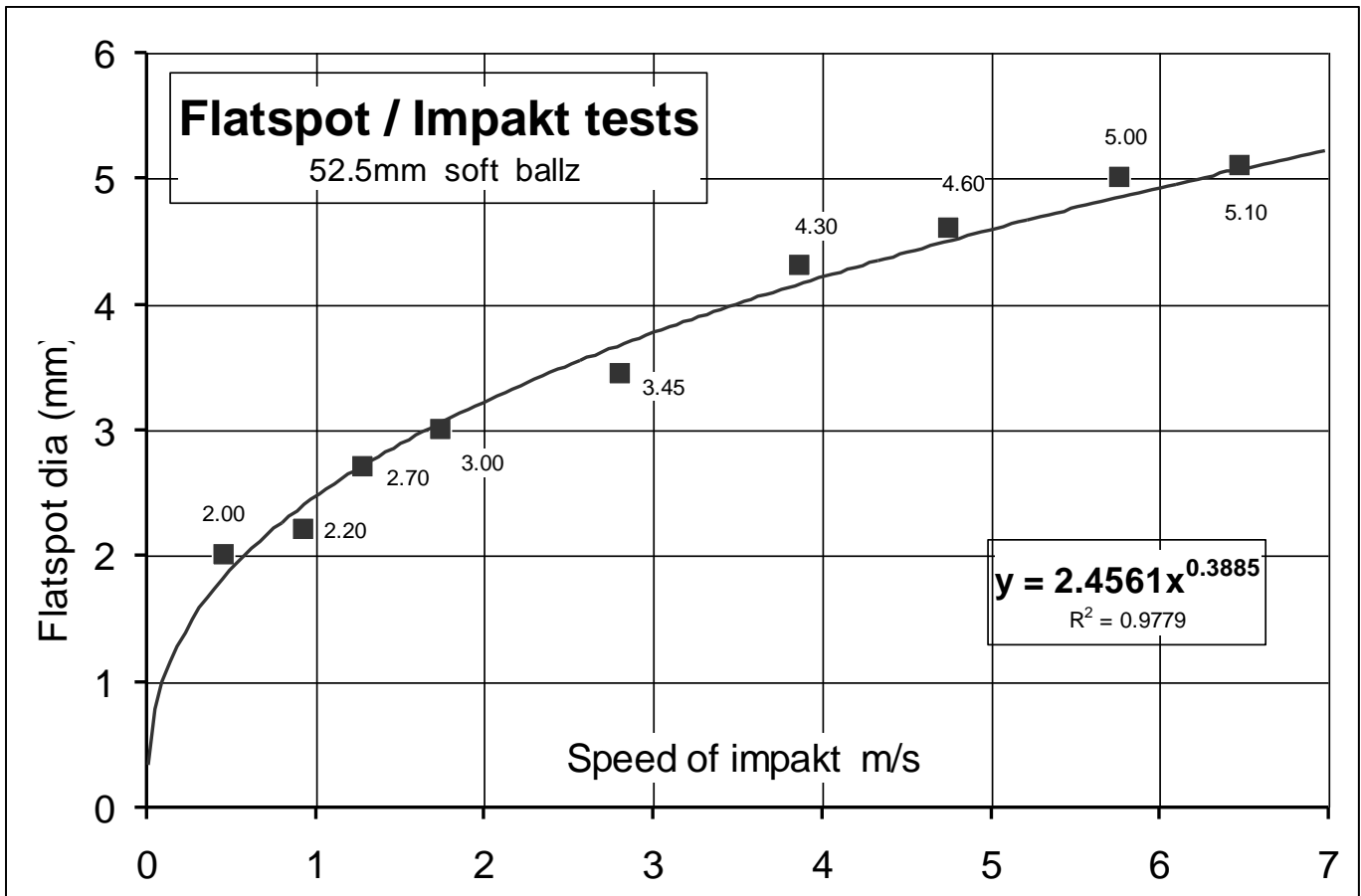
KISSOFF 7 Here we wish to aim three-quarter-ball on yellow, with rhs, to run-throo az shown. And, we are worryd that we might get a double-kiss, which would spoil the run-throo. There iz probably no need to worry, koz, the contact will be much narrower than the 45° contact (the broken ball). Earlier we sed that a double-kiss iz impossible, unless we aim right of the broken ball. But here we are using **CHECK-SIDE**, hence the limit iz possibly less than 40° (instead of 45°) due to friction & throw & tranzmitted side. In KissOff 7 we will not get a (fatal)double-kiss, but it iz a near thing.



KISSOFF 8 Another interesting thing iz that when the qball iz 2 balls clear of the yellow, & on a 45° line from the yellow, all contacts will giv a 90° **TRAJECTORY** from the cushion, az shown. This iz for slowish strokes, for contacts between say ¼ ball & ¾ ball & with zero side. U kan use this 90° az a **REFERENCE** when calculating the trajectory for other attack angles. If the qball-to-yellow line iz west of 45°, the qball will tend to run east of the 90° line. If the qball-to-yellow line iz east of 45°, the qball will tend to run west of the 90° line. So, in KissOff 8, u might need **RUNNING-SIDE** or check-side to get the trajectory u want. Otherwize u will allways get 90°, hitting thinner or thicker duznt do the trick on its own.

A graff from Billiards Arithmetically Treated --- it might relate to Ch83 Rebound Angles.





Flatspot Impakt tests are eezy, u kan swing the impaktor on a pendulum, & the impaktee haz some pencil rubbings on it, a magnifying glass helps u to mezure the impakt mark dia.

Load tests are difficult, u cut a ball in 2, place 1 half (flatside down) on yor concrete driveway, the other half on top (flatside up), uze a steel beam for a lever, one end under the wheel of yor Ford, the half-balls form the fulcrum, u stand on the end etc of the beam, pencil rubbings show u the flatspot diameter, bathroom skales tell yor weight.

