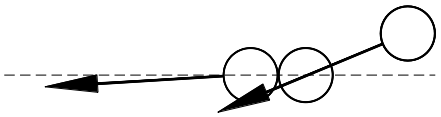
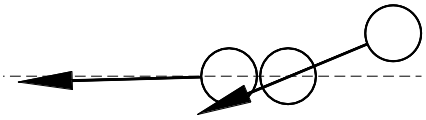
Friendly Gaps

Friendly 1A Frozen Sets We all know that when 2 reds are touching, ie frozen, ie a set, it iz eezy to pot the sekond red, it will head off on the ball-to-ball line, the set-line. And we all know that if u hit the first ball to the left of the line, the sekond red goze left of the line allso, due throw, due to friktion.



1 mm Gap (not shown) If the 2 reds are say 1mm apart, u don't havta be so karefull about how u kontakt the first red. If u hit the first red to the left, the sekond will go left allso, but not az far left az when the gap iz zero, ie frozen, ie set.

Friendly 1B 2mm Gap The sekond red behaves even better when the gap iz 2mm.



Friendly 1C 20mm Gap But, if the reds are say 20mm apart, hitting the first red a few degrees left of the line now rezults in the sekond red going a couple of degrees right.

Gap The question arizes, what size gap would be most forgiving? Somewhere in between 2mm & 20mm there must be a gap where the red will do its best to go straight along the set-line, even tho the first red iz hit off-line.

I think that **Geza Gazdag** mentions this sort of thing in **The Accomplished Cueman**, he sez that, when allmost frozen, the balls are short-sighted, no matter which direktion u hit the first red the sekond red goze pretty-well to the same place each time.

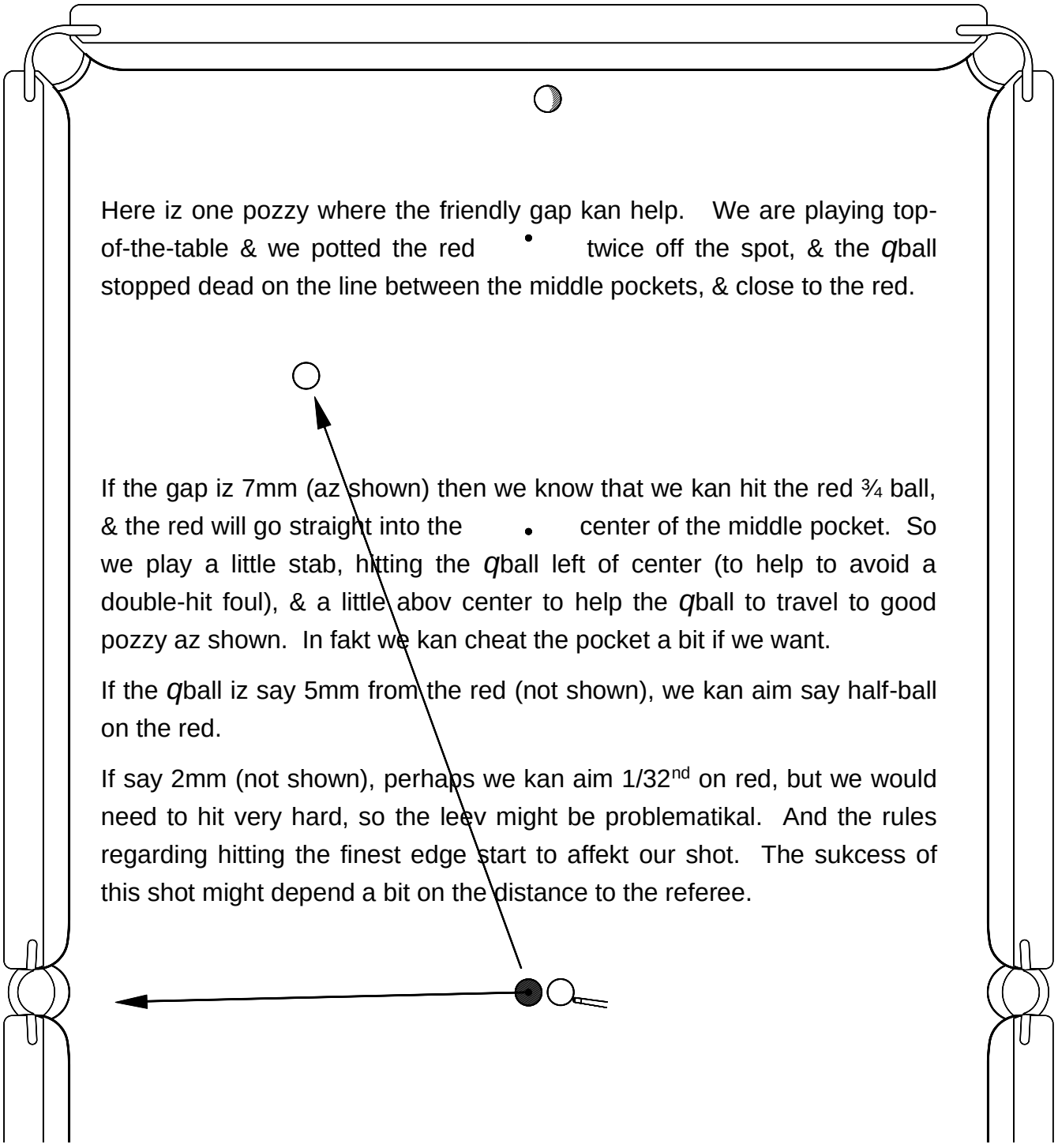
Drawings I decided to do some tests to check this out, but tests of throw & friktion etc are diffikult to do akuratly. So i firstly did 3 akurat komputer drawings (not shown here), showing the 2 reds **1mm** apart, then **2mm** apart, then **6mm** apart. I drew the line the sekond red would take when hit **¾ ball** by the first red, & allso when hit **1/32nd ball**. In fakt, i drew 2 tracks for each impakt, one track on the exakt ball-to-ball line, ie for **zero friktion**, & one track angled at **3.43°** to that track, ie for 6% friktion.

6mm Gap The drawings showed that (in theory) the friendlyst gap woz 6mm. Any red-to-red kontakt between full-ball & ¾ ball would send the sekond red virtually straight along the set-line. Now that i had my theoretikal answer, i woz ready to do the praktikal tests.

Tests However, when i placed the 2 reds with a 6mm gap on the centerline of my home table, i found that i could hit the first red (uzing a third ball, ie a *q*ball) allmost half-ball onto the sekond red, & still sukceed in sending the sekond red up the centerline. Hence, any red-to-red kontakt between full-ball & thick-half-ball sent the red up the centerline (nearnuff). It appears that the **tranzmitted side** on the sekond red gave it some additional kurv, due partly i think to the direktion of the **nap** (this test woz with the nap, ie from baulk to top).

8mm Gap An 8mm gap gave me the rezult i wanted, ie any red-to-red kontakt of between full-ball & three-quarter-ball sent the red along the set-line (near-nuff). This test woz with the nap.

Doing the test from the top-of-the-table to the baulk, ie against the nap, a **7MM GAP** did the trick. The nap eliminated some or all of the kurv. **HMM** I kan think of a few instances where billiards & snooker players kan (or allready do) uze theze rezults. I suppoze that the size of our **FRIENDLY GAP** depends on the size of the balls, the softness of the balls (**KRAPPS** are very soft), the size of the ball-to-ball friktion (krapps hav a suicidal hi friktion), & whether the cloth haz a nap. But mainly on what sort of shot u hav in mind. And it depends on yor definition of friendly. And one more thing, have we mentioned the **SPEED** of the shot yet? We know that kut-angles allways inkreec with speed. Hence, in the abov drawing for the 8mm gap, if u **HIT HARD** u are likely to see the red go a bit right of the line, a long way right aktually, hence hit hard the friendly gap might be **6MM**.



Here iz one pozzy where the friendly gap kan help. We are playing top-of-the-table & we potted the red twice off the spot, & the *q*ball stopped dead on the line between the middle pockets, & close to the red.

If the gap iz 7mm (az shown) then we know that we kan hit the red ¾ ball, & the red will go straight into the center of the middle pocket. So we play a little stab, hitting the *q*ball left of center (to help to avoid a double-hit foul), & a little abov center to help the *q*ball to travel to good pozzy az shown. In fakt we kan cheat the pocket a bit if we want.

If the *q*ball iz say 5mm from the red (not shown), we kan aim say half-ball on the red.

If say 2mm (not shown), perhaps we kan aim 1/32nd on red, but we would need to hit very hard, so the leev might be problematikal. And the rules regarding hitting the finest edge start to affekt our shot. The sukcess of this shot might depend a bit on the distance to the referee.