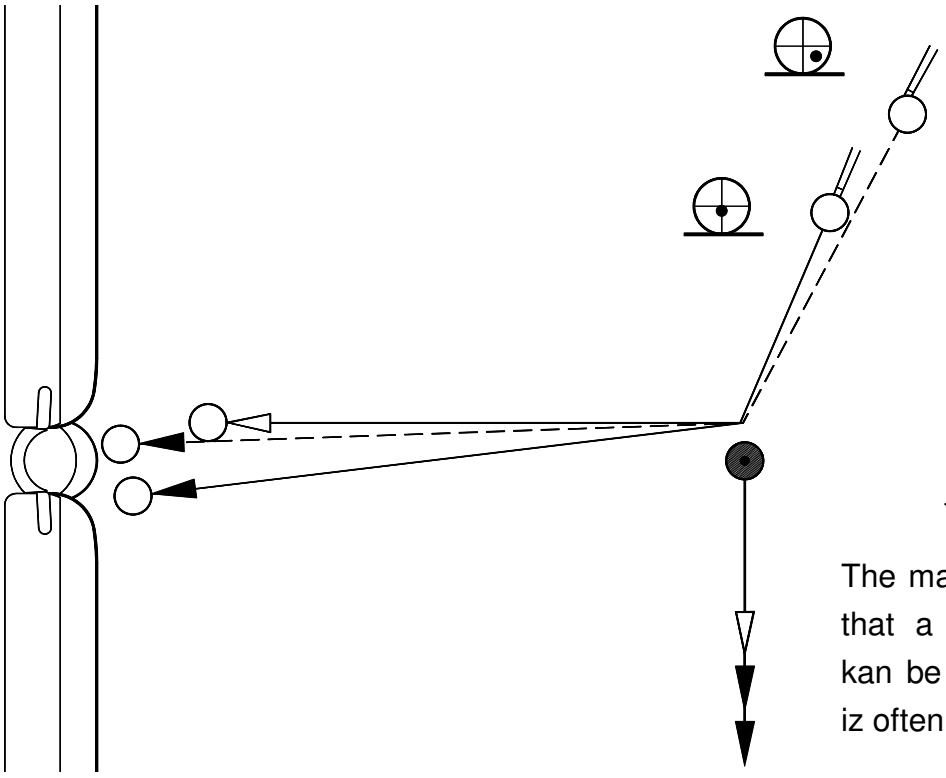
The 90° Rule
Stun Loozerz

90° Rule The drawing showz the red being hit direktly down the ***centerline*** of the table, off the ***Center Spot***. In standard ***skoolkid theory***, if the *q*ball haz zero ***topspin*** & zero ***bottomspin***, ie ***stun***, then the *q*ball exits at 90° to the red'z trajektory --- in which kase the *q*ball exits az per the ***white arrow***, ie the *q*ball hits the near jaw of the pocket. Here skoolkidz assume ***(a)*** zero ball-to-ball ***energy*** loss, ie that the coefficient of impakt (***e***) iz 1, & ***(b)*** zero ball-to-ball ***friktion***. In skoolkid MathLand, if there woz ball-to-ball friktion, then the angle between the red'z & *q*ball'z trajektoryz kood be az much az say 95° (not shown), or az little az say 85° (not shown) --- this would depend on the sidespin on the *q*ball, & the value of friktion. Perhapz someone should tell skoolkidz about --- ***(c)*** flatspot s*q*eez.

Running Side In reality, koz ***e*** iz about ***0.90***, the *q*ball'z trajektory would be more like the angle shown by the ***broken arrow,*** if the *q*ball had lots of ***running*** side before impakt --- here the *q*ball findz the pocket. Don't forget that we are talking about a *q*ball with stun, ie zero topspin --- the small amount of skrew shown in the inset iz meant to evaporate just az the *q*ball reechez the red. U kood acheev a similar angle (ie the broken arrow) if u uzed zero sidespin, but more skrew (not shown).

Check Side And, if the *q*ball had check side (or zero side), the *q*ball'z trajektory would be more like the angle shown by the ***full arrow*** --- the *q*ball hits the far jaw. Once again, az allready mentioned, u kood get a loozer here if u uzed enuff skrew (not shown). Don't forget, in each of theze kasez the red takes off down the centerline az shown.



90° Rule

So, the 90° rule works

(a) if u mezure the 90° from the center of the red, &

(b) if u uze running side (see the broken arrow), &

(c) if u uze zero side, but enuff skrew (not shown).

Unmissable

The main point that i want to make iz that a 90° running-side stun loozer kan be invented allmost anytime, & it iz often unmissable. Cannonz allso.