TP B.23
Cue Pivot Point Required for Known CB Carom Angle

supporting:
“The Illustrated Principles of Pool and Billiards”
http://billiards.colostate.edu
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This technique is from Bob Jewett’s January, 2021 Billiards Digest column. If you pivot the cue 90deg about a certain point along the aiming line, with the tip starting at the ghost ball, a line through the butt of the cue and the ghost-ball will point in the final CB direction for a rolling-CB shot.

\[
\tan(\theta_c) = \frac{(c - x)}{x}
\]

So the required pivot point to create a known CB deflection angle is:

\[
x(\theta_c) := \frac{c}{\tan(\theta_c) + 1}
\]

Using the CB deflection angles (\(\theta_c\)) for standard ball-hit-fractions (f) from page 8 in TP A.6, the required pivot distances from the tip for a standard-length cue are:

<table>
<thead>
<tr>
<th>f</th>
<th>(\theta_c)</th>
<th>x((\theta_c))</th>
</tr>
</thead>
<tbody>
<tr>
<td>(\frac{1}{2})</td>
<td>34·deg</td>
<td>34.6·in</td>
</tr>
<tr>
<td>(\frac{1}{4})</td>
<td>27·deg</td>
<td>38.4·in</td>
</tr>
<tr>
<td>(\frac{3}{4})</td>
<td>28·deg</td>
<td>37.9·in</td>
</tr>
</tbody>
</table>

30 degree rule average:

\[
x(\theta_{30}) = 36.8·in
\]