TP B.16
CB-OB distance for follow cling

supporting:
"The Illustrated Principles of Pool and Billiards"
http://billiards.colostate.edu
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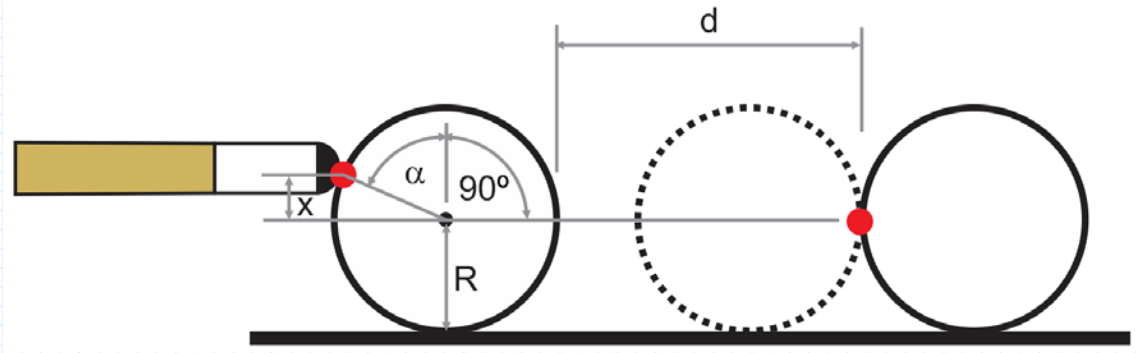

ball radius:	$R := 1.125 \cdot in$	half of 2 1/4" diameter
normal roll tip height:	$x := 0.4 \cdot R$	from TP 4.2

Angle to tip contact point from vertical:

$$\alpha := \operatorname{acos}\left(\frac{x}{R}\right) = 66.422\ °$$

Distance CB travels (based on nunber of full revolutions "n") to have the tip contact point arrive at the OB contact point and create cling:

$$d(n) := R \cdot ((\alpha + 90°) + n \cdot 360°) \qquad n := 0..2$$

Number of "balls" between CB and OB to create cling condition:

$$b(n) := d(n) \div (2 \cdot R)$$

Results:

$$n = \begin{bmatrix} 0 \\ 1 \\ 2 \end{bmatrix} \qquad d(n) = \begin{bmatrix} 3.1 \\ 10.1 \\ 17.2 \end{bmatrix} in \qquad b(n) = \begin{bmatrix} 1.4 \\ 4.5 \\ 7.6 \end{bmatrix}$$

So when the CB is about 1.4 balls or 4.5 balls from the OB, don't expect typical follow action.