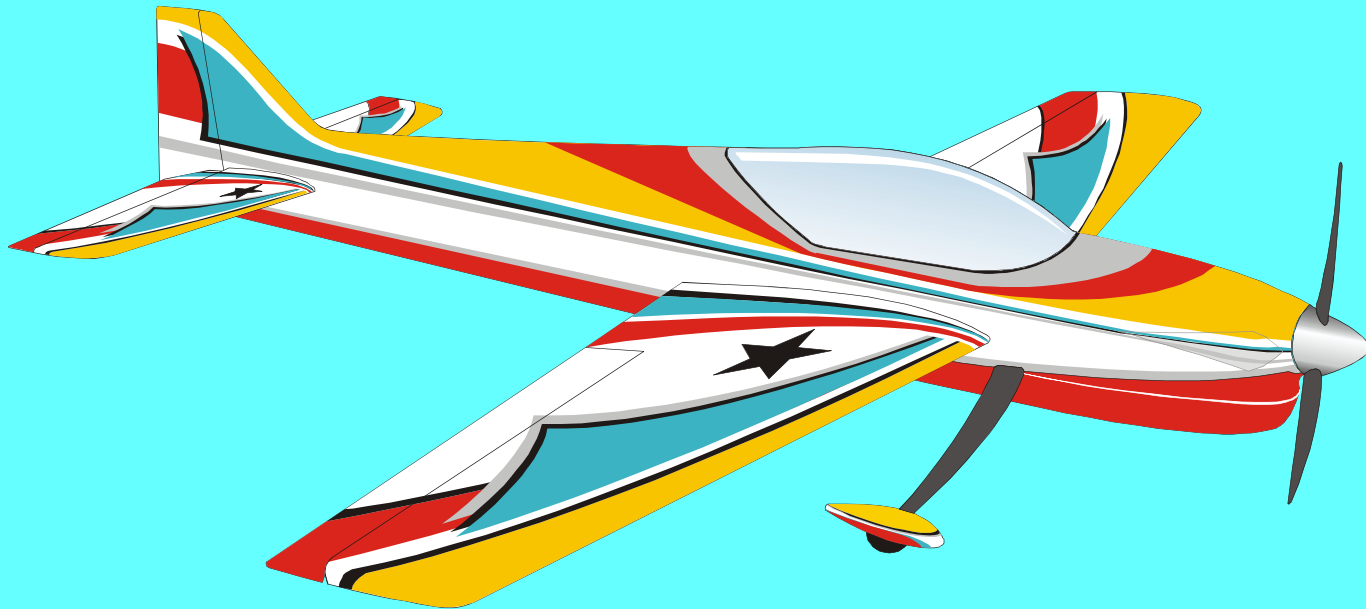
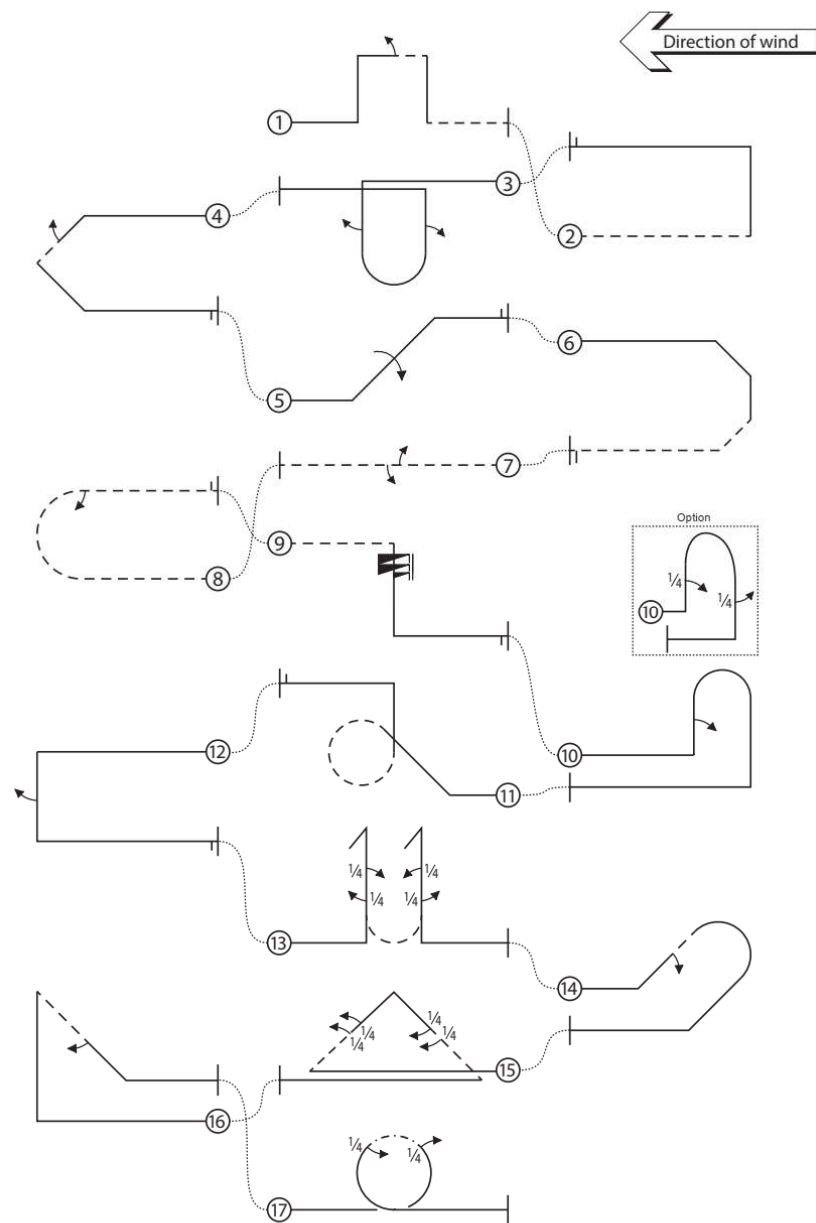


Flying and Judging F3A

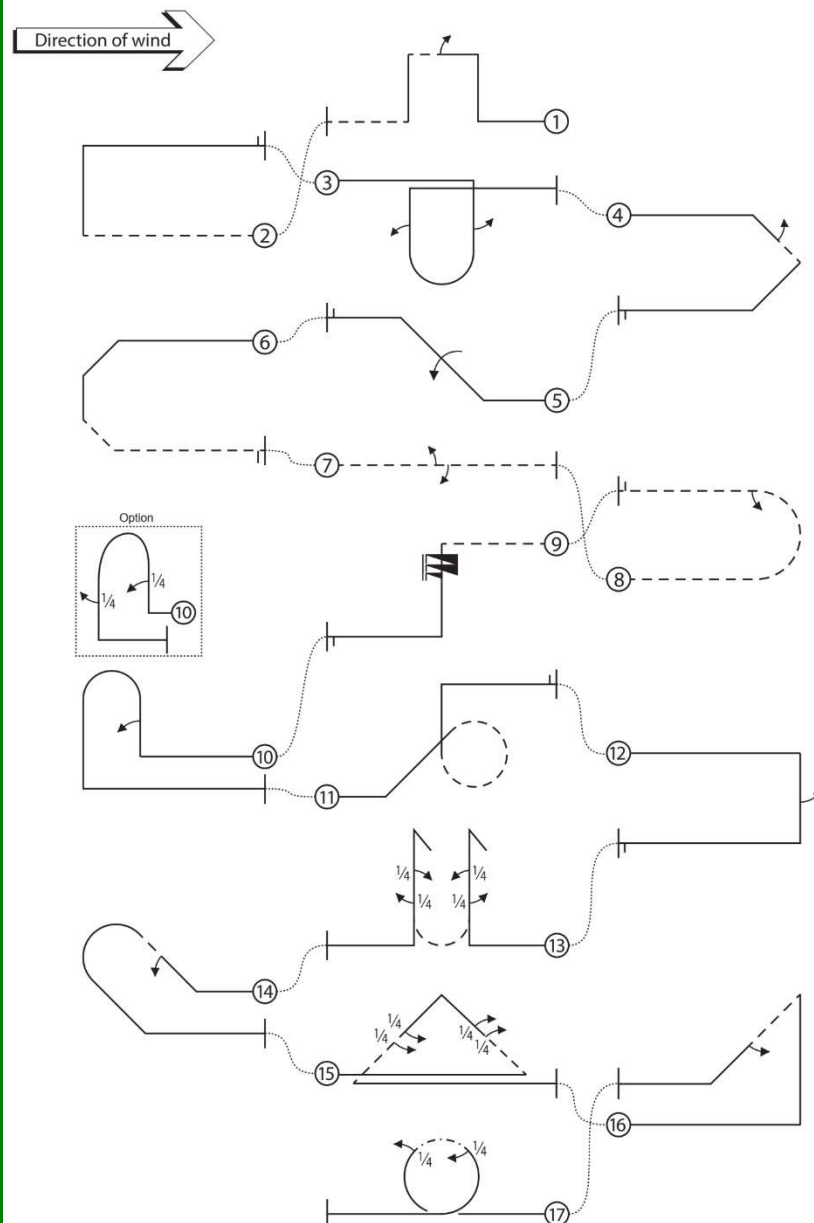


SCHEMATIC MANOEUVRE ILLUSTRATIONS
SCHEDULE A-23

ADVANCED SCHEDULE A-23 (2021-2023)

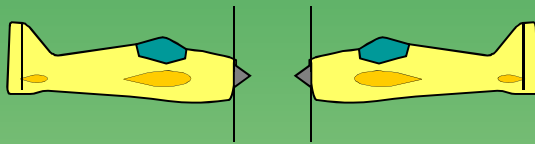


ADVANCED SCHEDULE A-23 (2021-2023)

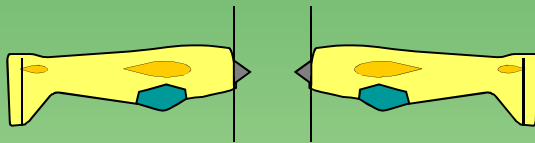




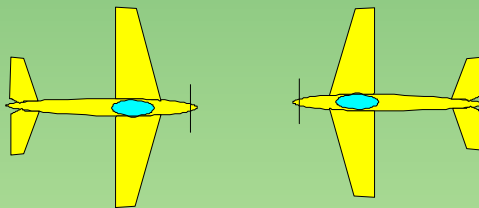
Explanations:



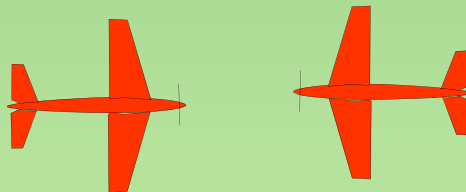
Aircraft upright



Aircraft inverted



**Aircraft in Knife-Edge
View from Top**



**Aircraft in Knife-Edge
View from Below**

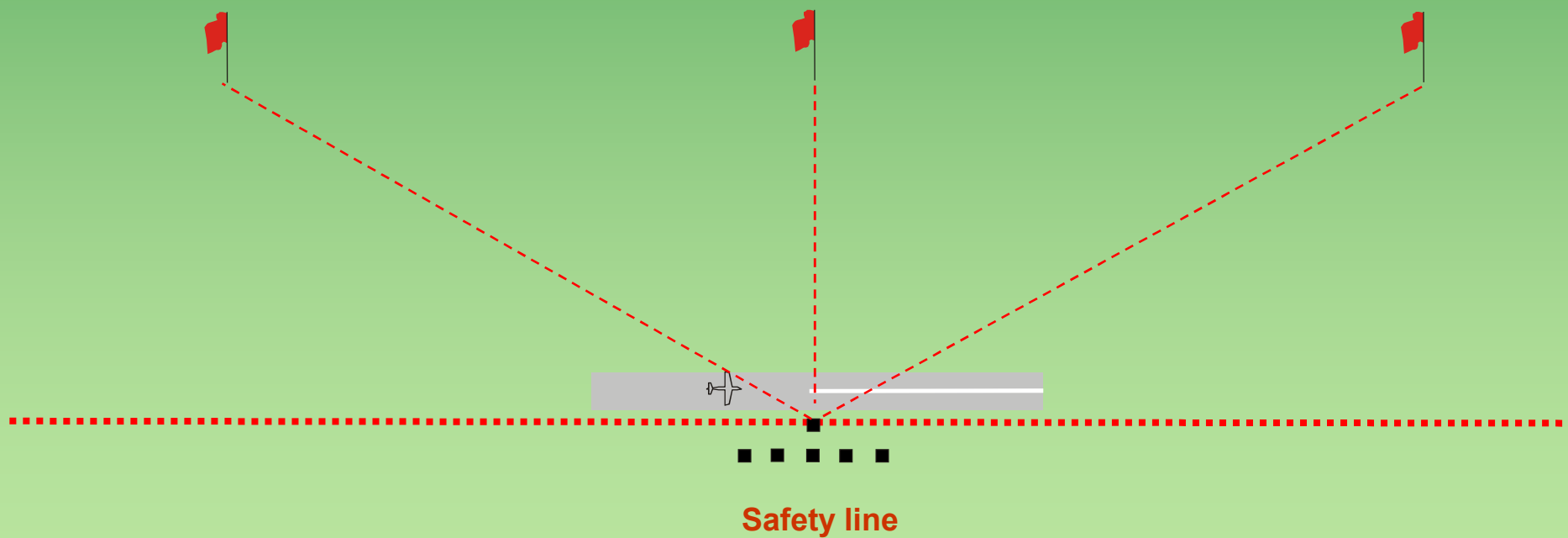


Reference points



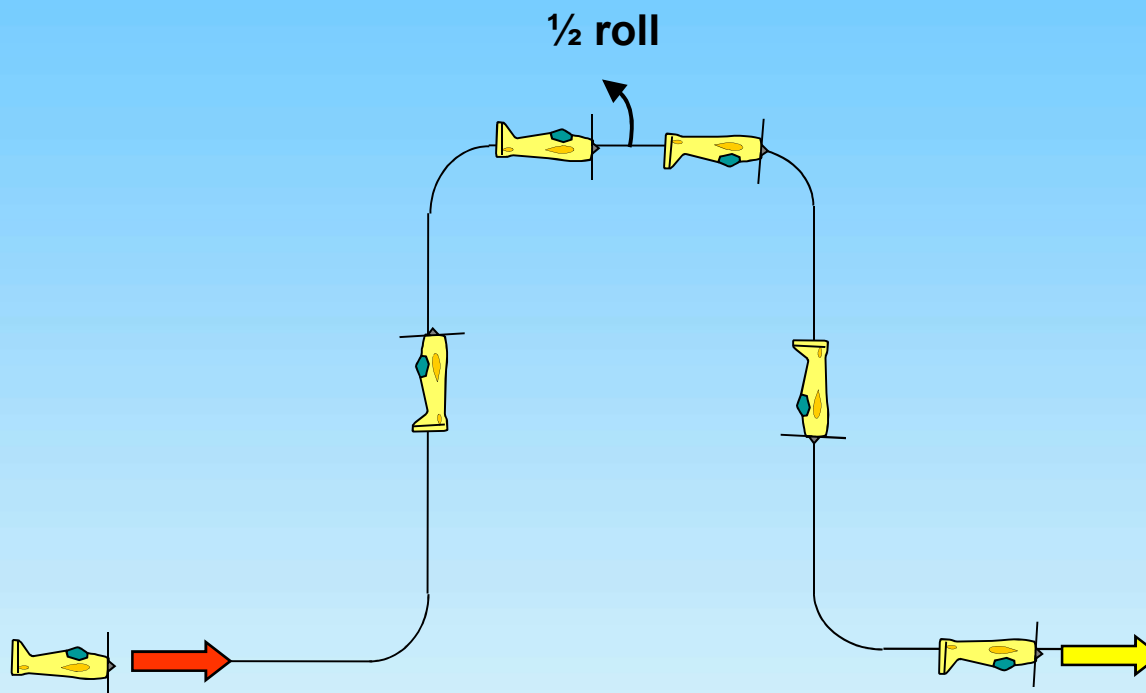
Take-off procedure (not judged, not scored)

 **wind**





A-23.01 Top Hat with half roll on top



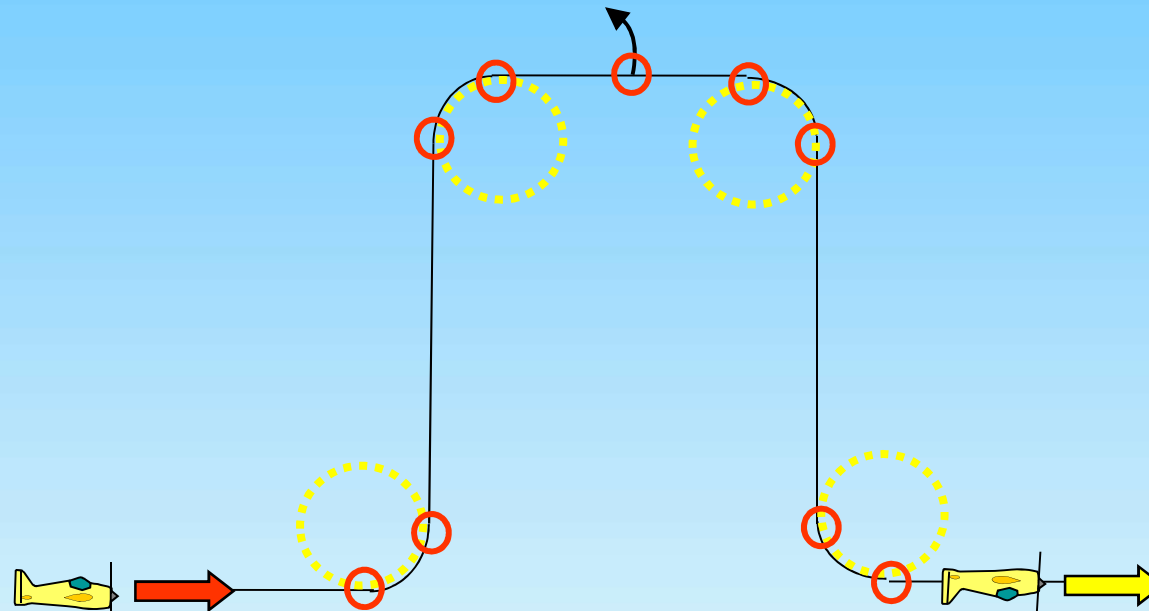
From upright pull through a quarter loop into a vertical upline, push through a quarter loop, perform a half roll, pull through a quarter loop into a vertical downline, push through a quarter loop, exit inverted.





A-23.01 Top Hat with half roll on top

$\frac{1}{2}$ roll on middle of the line.

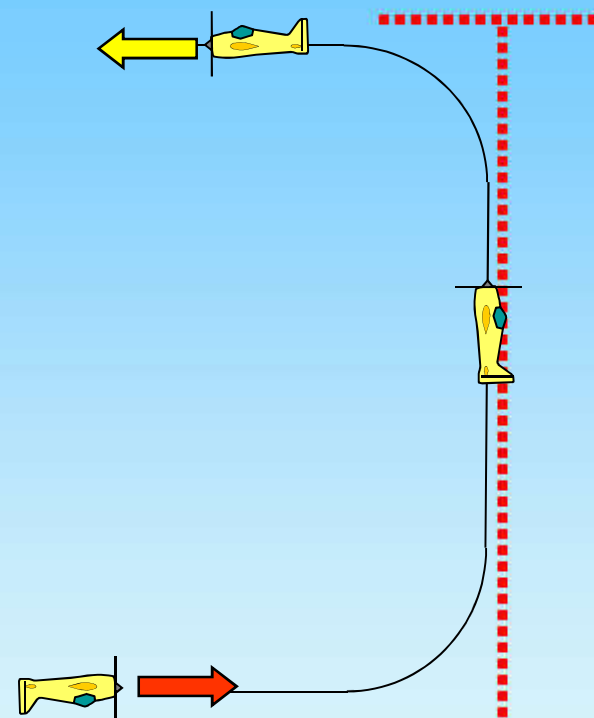


All radii are equal.





A-23.02 Half Square Loop

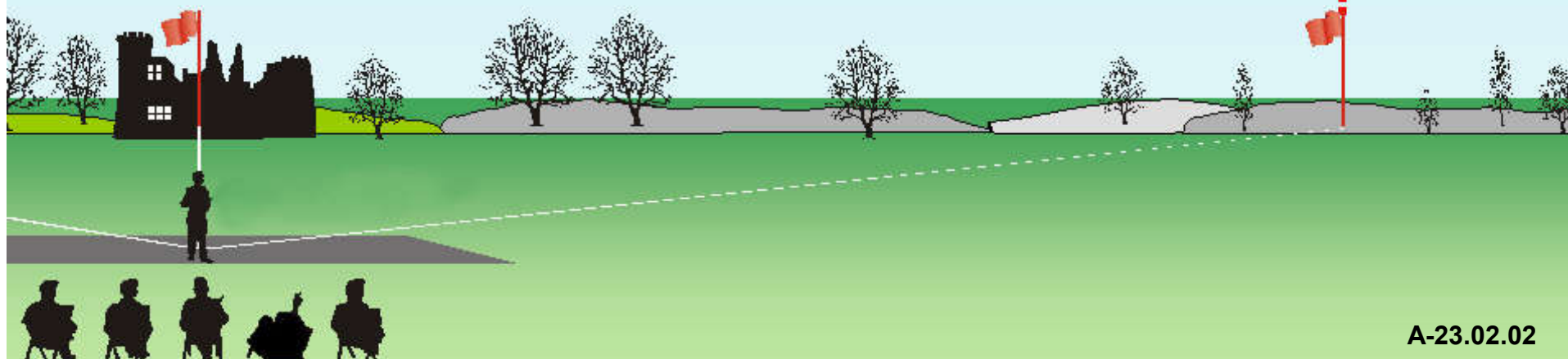
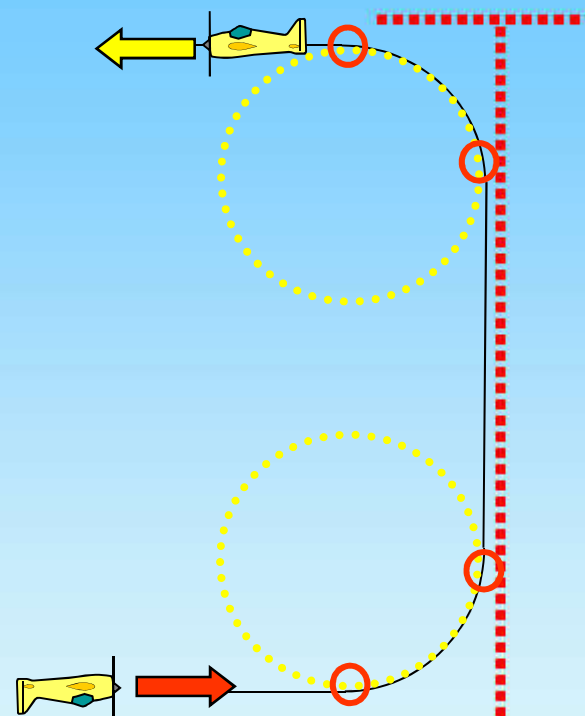


From inverted, push through a quarter loop into a vertical upline, push through a quarter loop, exit upright.



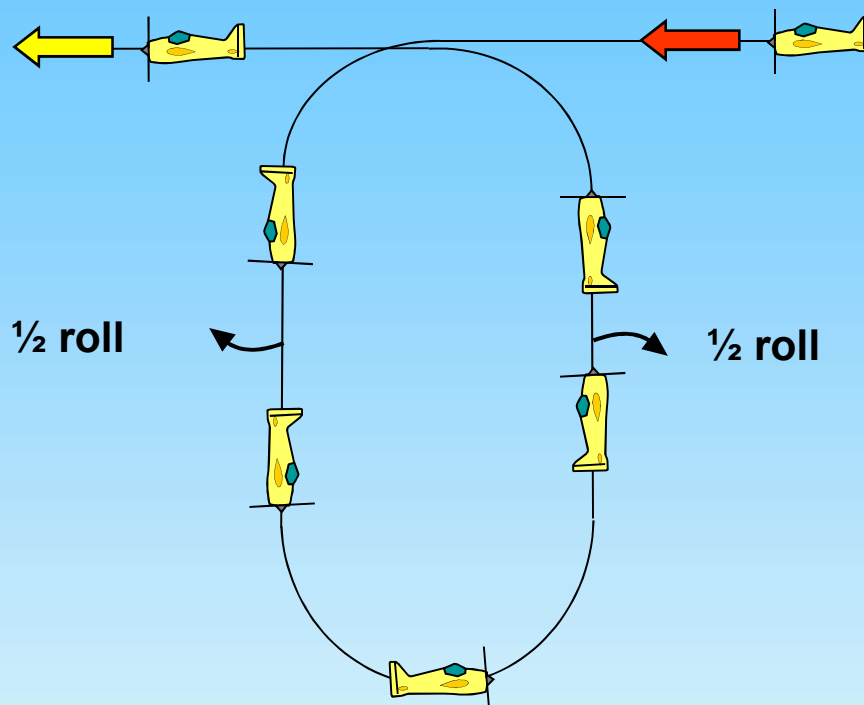
A-23.02 Half Square Loop

All radii are equal.





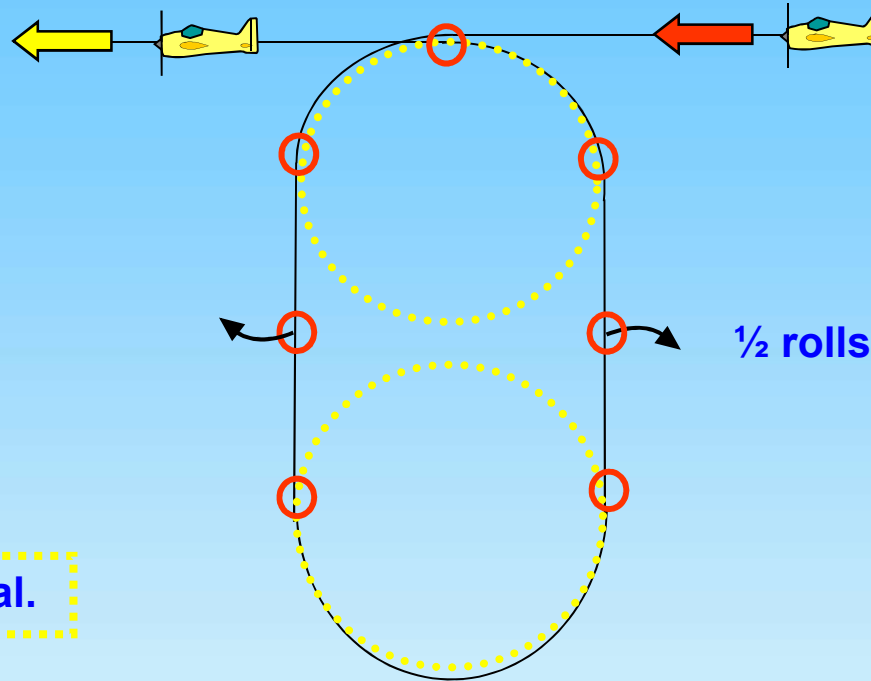
A-23.03 Push-Pull-Push Humpty-Bump with half roll, half roll



From upright, fly past center push through a quarter loop into a vertical downline, perform a half roll, pull through a half loop into a vertical upline, perform a half roll, push through a quarter loop, exit upright.



A-23.03 Push-Pull-Push Humpty-Bump with half roll, half roll

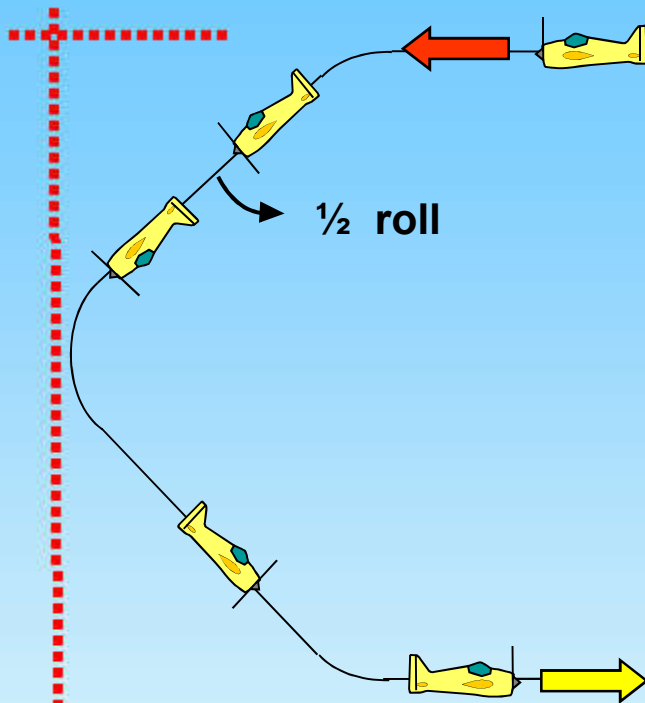


All radii are equal.



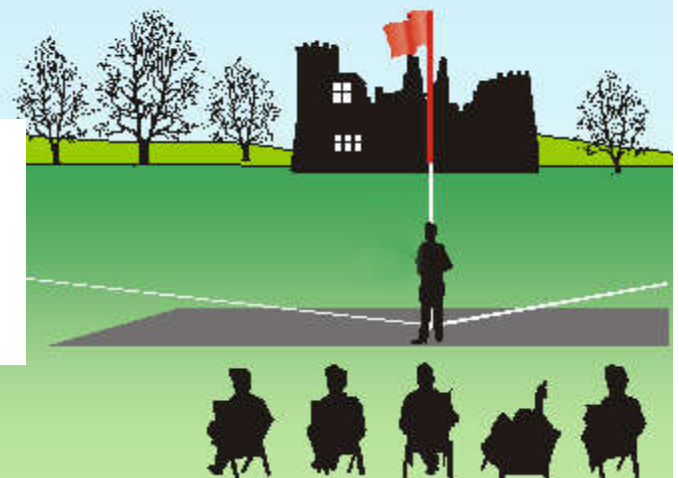


A-23.04 Half Square Loop on Corner with half roll



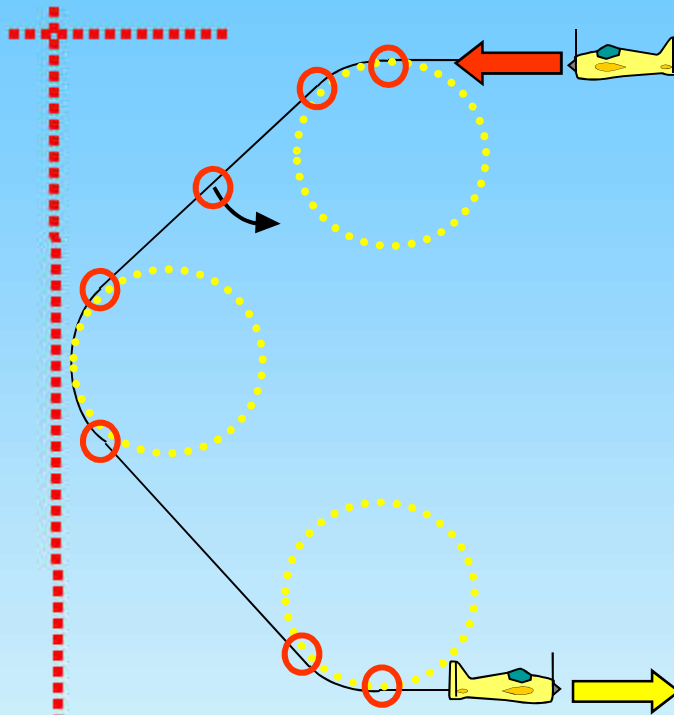
From upright, push through a one eighth loop into a forty five degree downline, perform a half roll, pull through a quarter loop into a forty five degree downline, pull through a one eighth loop, exit upright.

A-23.04.01





A-23.04 Half Square Loop on Corner with half roll



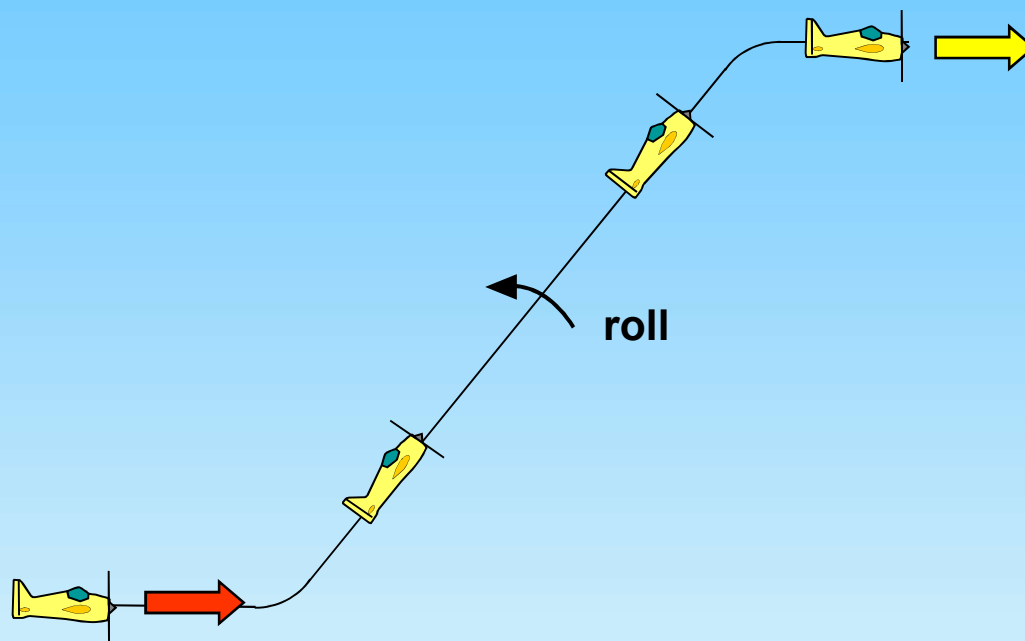
$\frac{1}{2}$ roll on middle of the line.

All radii are equal.





A-23.05 Forty Five degree Upline, with roll

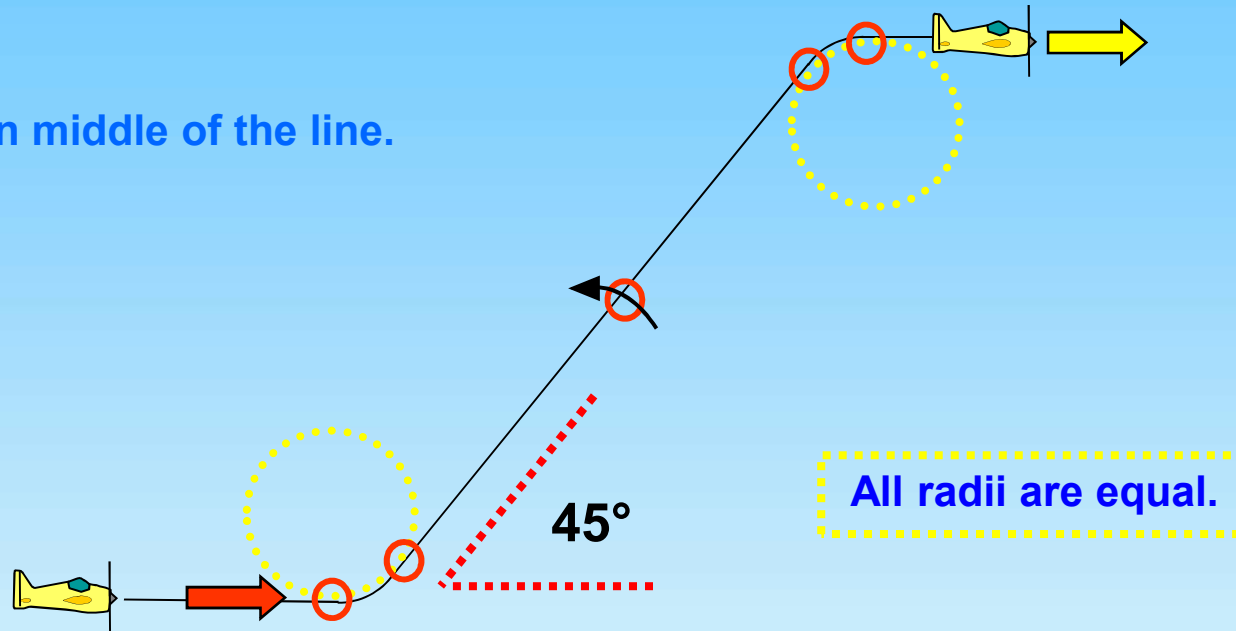


From upright, pull through a one eighth loop into a forty five degree upline, perform a roll, push through a one eighth loop, exit upright.



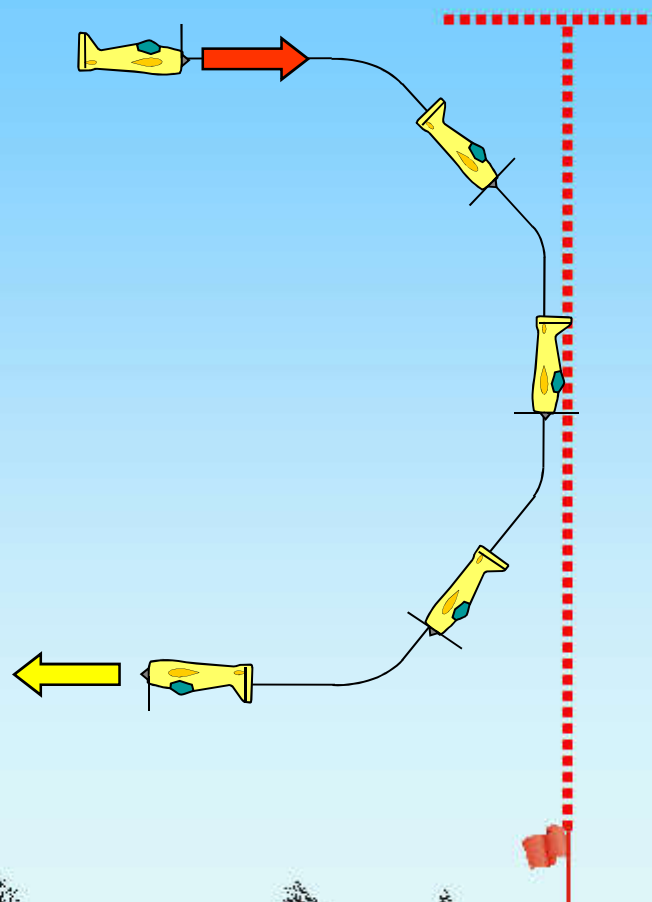
A-23.05 Forty Five degree Upline, with roll

Roll on middle of the line.





A-23.06 Half Eight Sided Loop



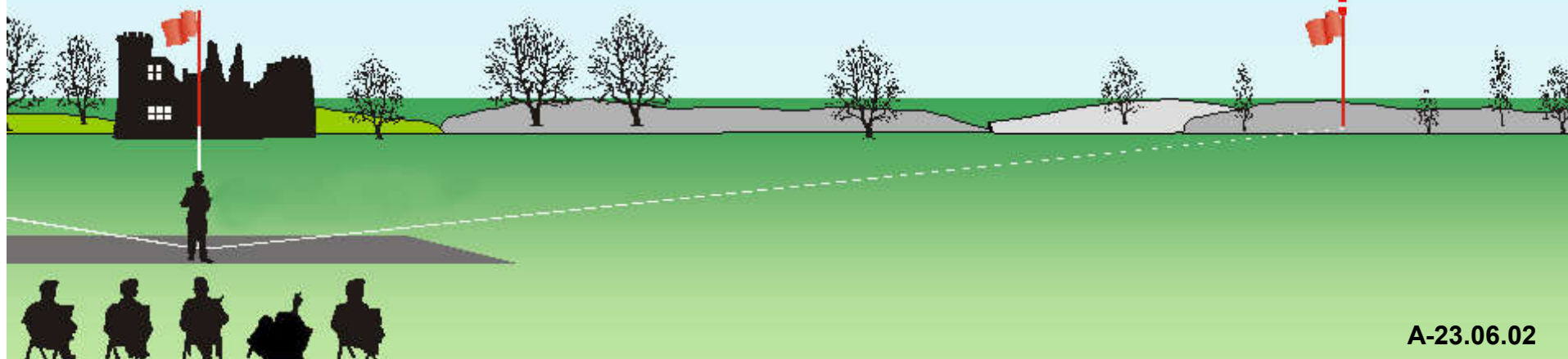
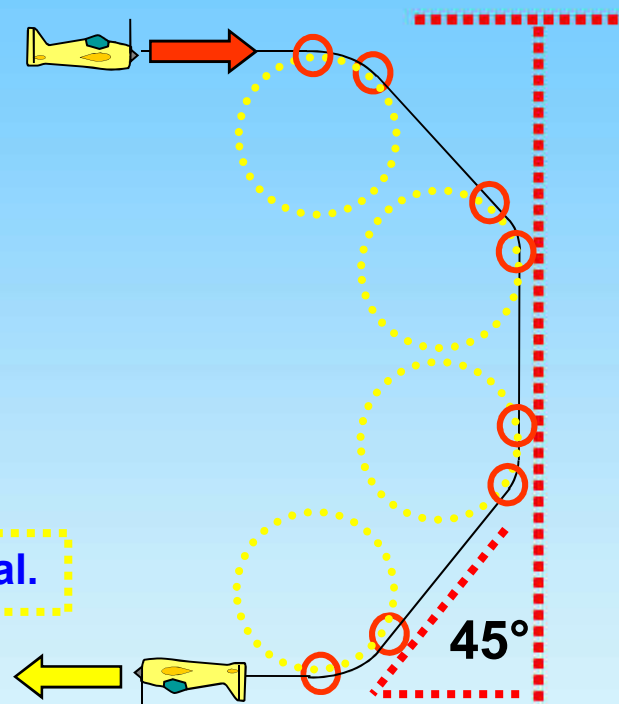
From upright push through a one eighth loop into a forty five degree downline, push through a one eighth loop into a vertical downline, push through a one eighth loop into a forty five degree downline, push through a one eighth loop, exit inverted.



A-23.06 Half Eight Sided Loop

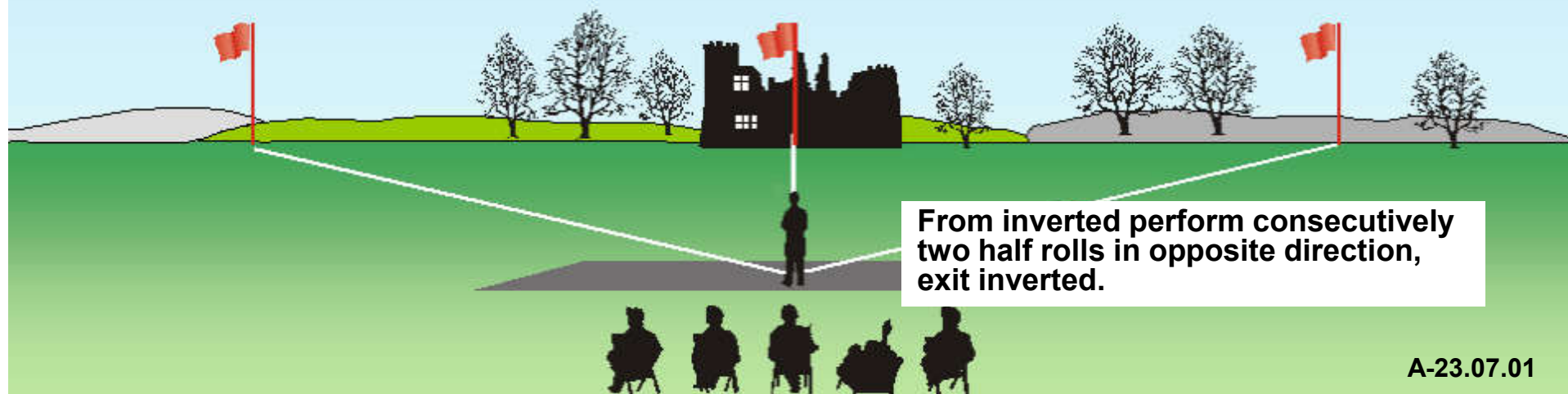
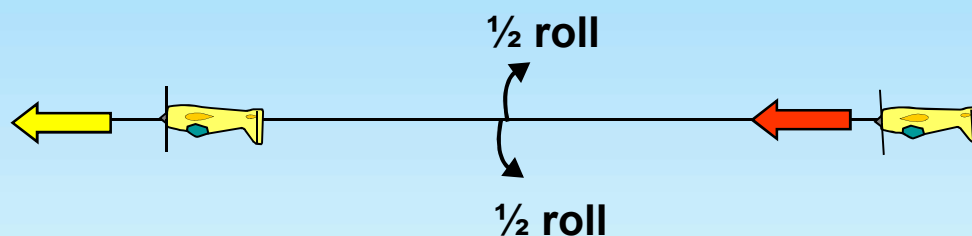
45° lines and vertical line
must be of equal length.

All radii are equal.





A-23.07 Roll Combination with two consecutive half rolls in opposite direction

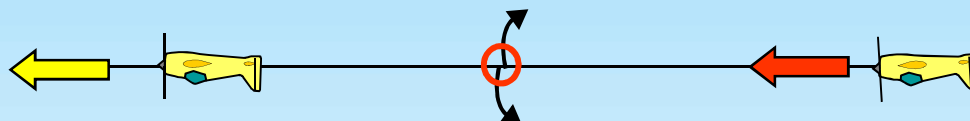


From inverted perform consecutively two half rolls in opposite direction, exit inverted.



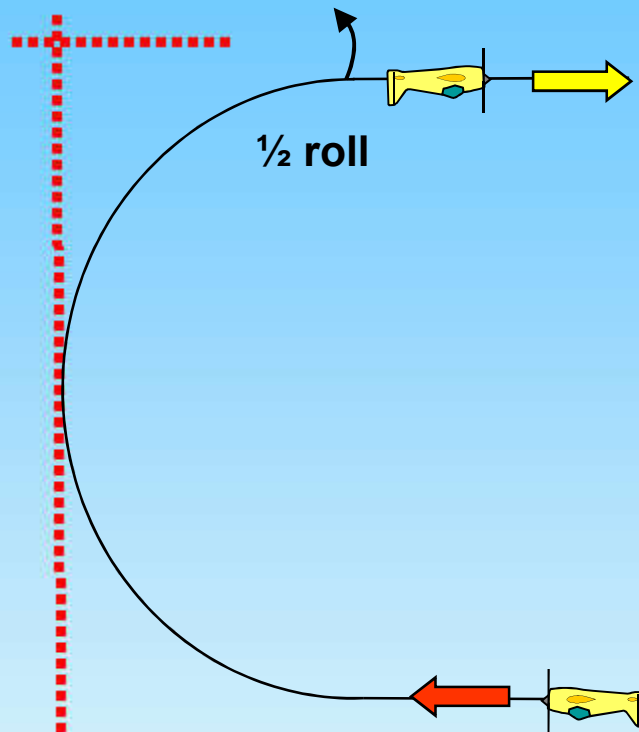
A-23.07 Roll Combination with two consecutive half rolls in opposite direction

Between rolls and part rolls in opposite direction there must be no line.





A-23.08 Pushed Immelmann Turn with half roll

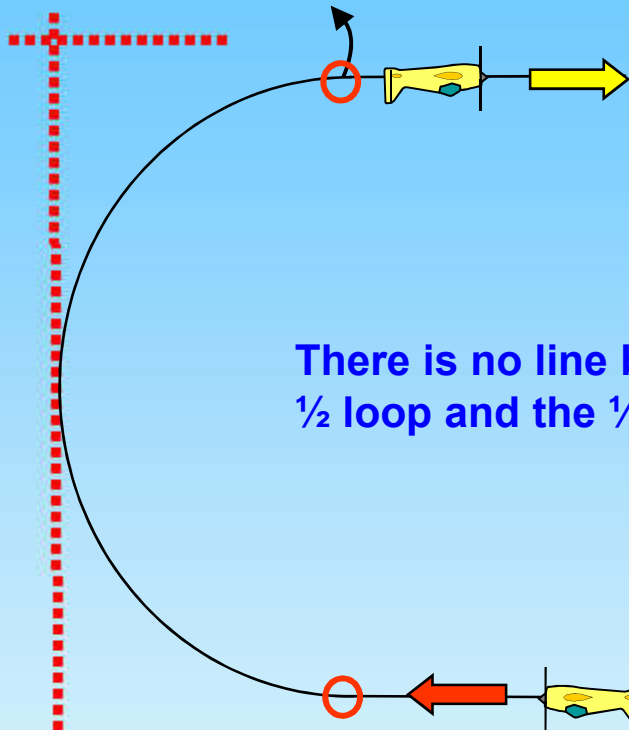


From inverted push through a half loop, perform a half roll, exit inverted .





A-23.08 Pushed Immelmann Turn with half roll

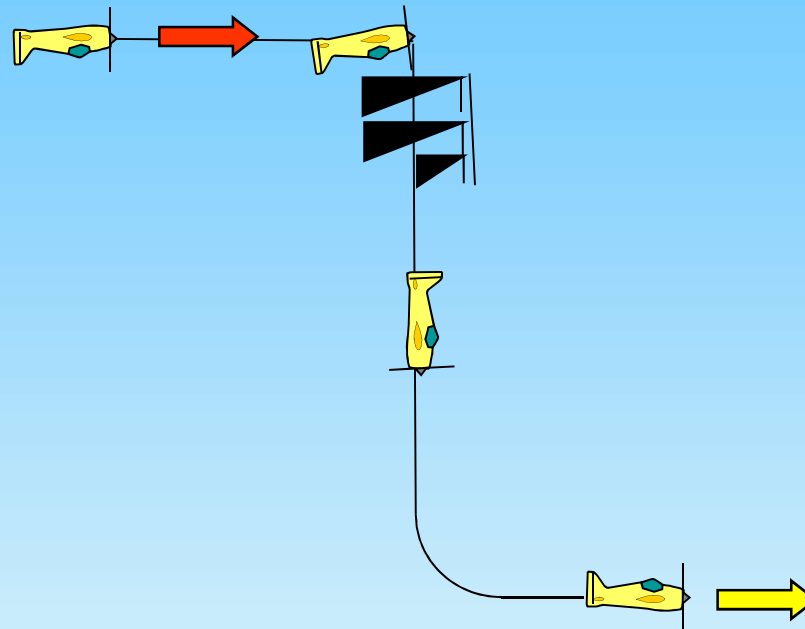


There is no line between the
 $\frac{1}{2}$ loop and the $\frac{1}{2}$ roll.





A-23.09 Inverted Spin two and a half turns

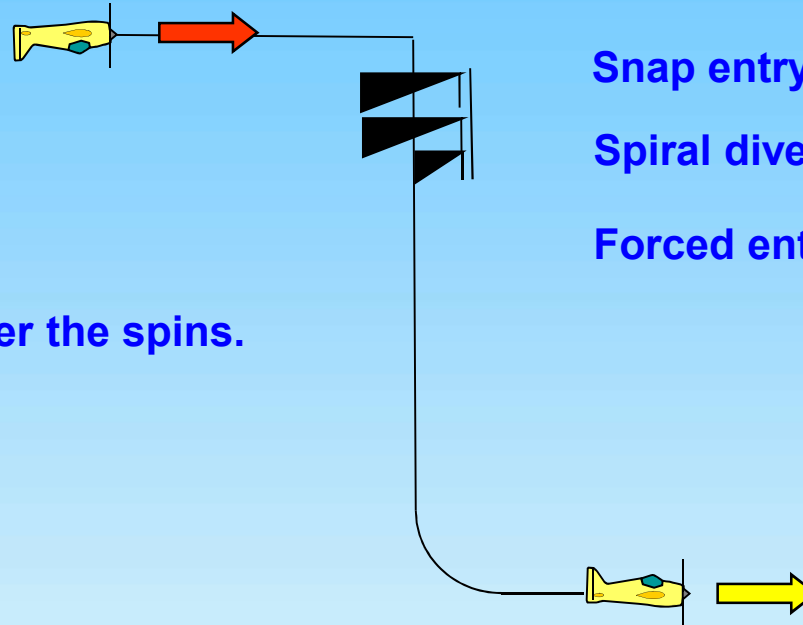


From inverted, perform an inverted spin with two and a half turns, perform a vertical downline, pull through a quarter loop, exit upright.





A-23.09 Inverted Spin two and a half turns



Snap entry - 0 points!

Spiral dive - 0 points!

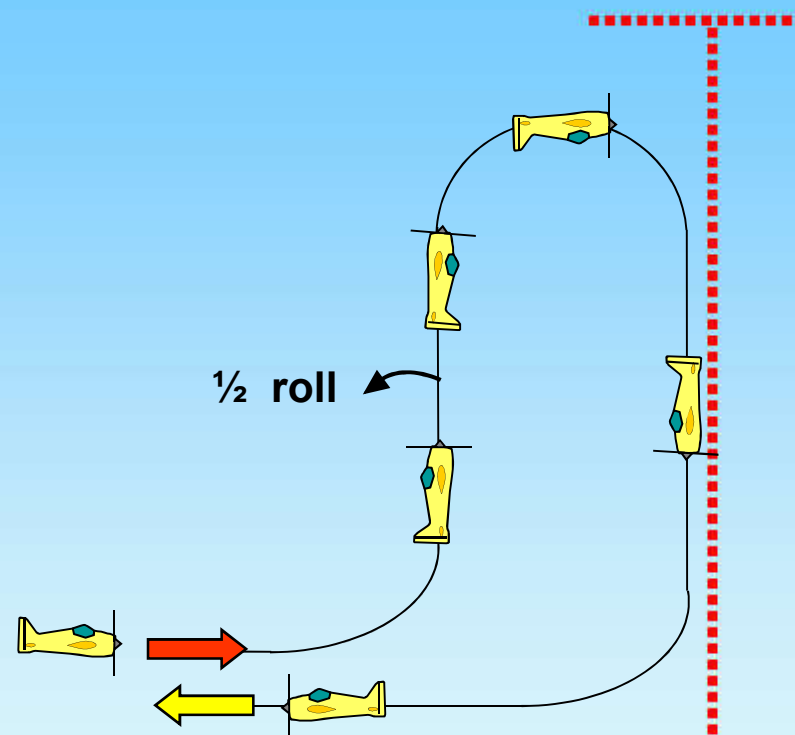
Forced entry: downgrade.

Line after the spins.





A-23.10 Pull-Pull-Pull Humpty-Bump, with half roll. Option: (quarter roll, quarter roll)



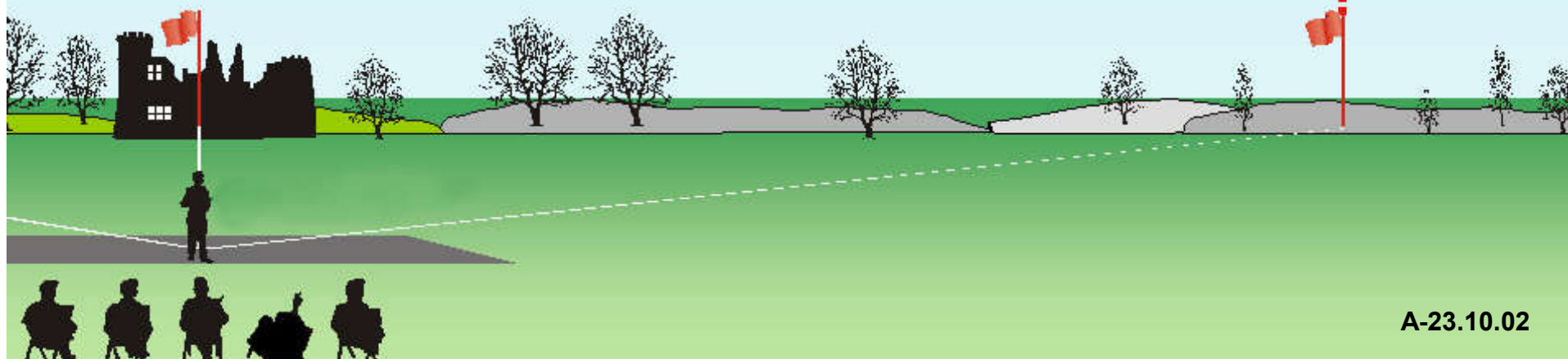
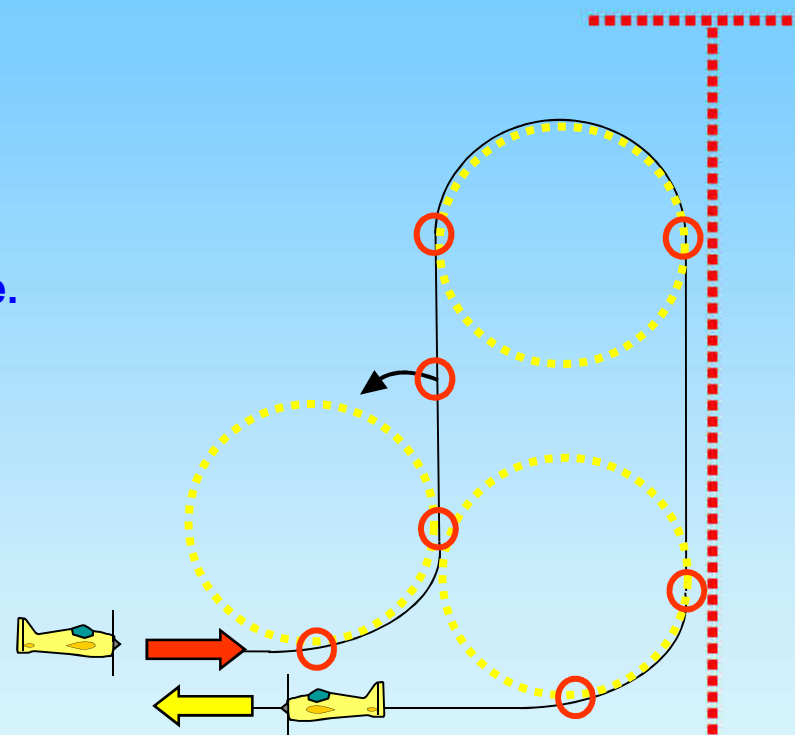
From upright, pull through a quarter loop into a vertical upline, perform a half roll, pull through a half loop into a vertical downline, pull through a quarter loop, exit upright.



A-23.10 Pull-Pull-Pull Humpty-Bump, with half roll. Option: (quarter roll, quarter roll)

$\frac{1}{2}$ roll on middle of the line.

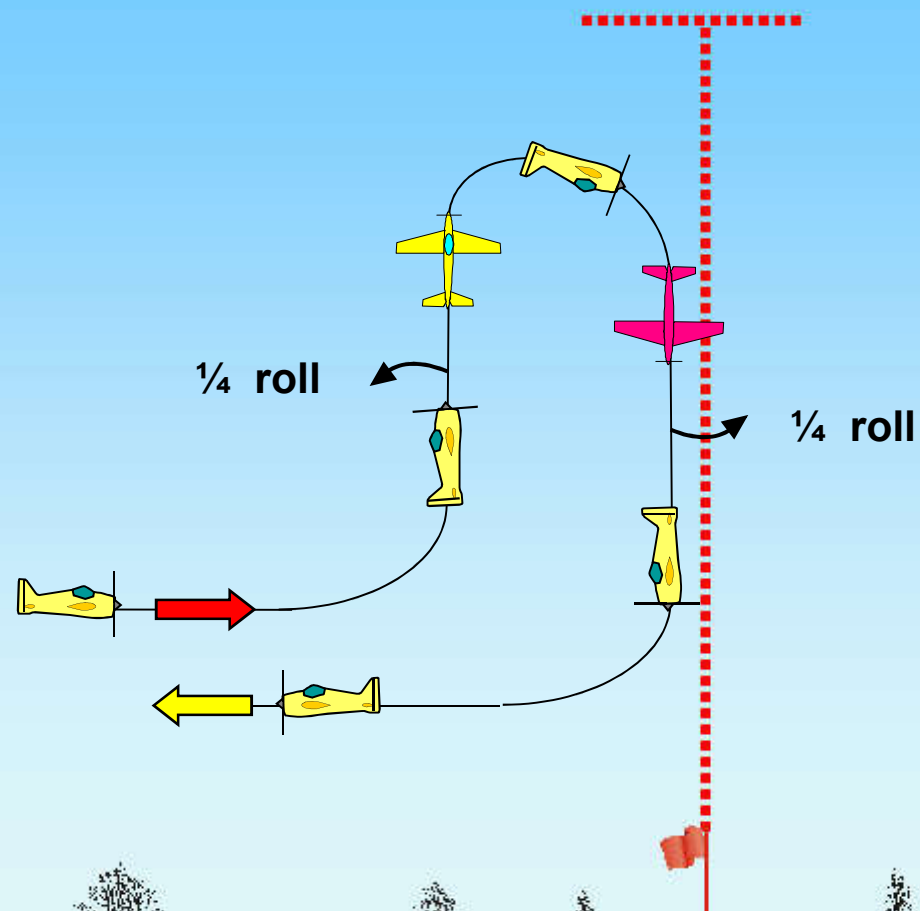
All radii are equal.





A-23.10 Pull-Pull-Pull Humpty-Bump, with half roll. Option: (quarter roll, quarter roll)

Option



From upright pull through a quarter loop into a vertical upline, perform a quarter roll, pull through a half loop into a vertical downline, perform a quarter roll, pull through a quarter loop, exit upright.

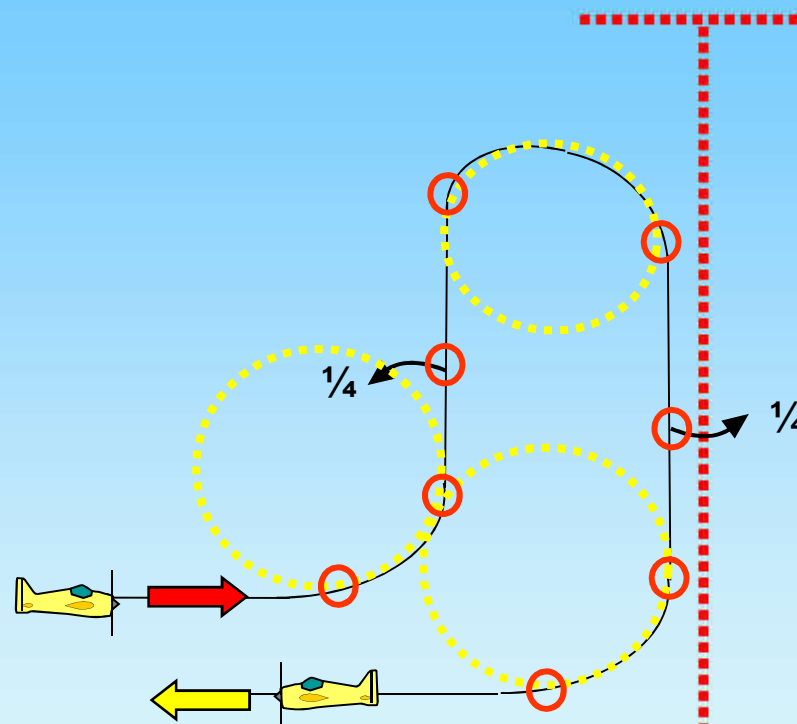


A-23.10 Pull-Pull-Pull Humpty-Bump, with half roll. Option: (quarter roll, quarter roll)

Option

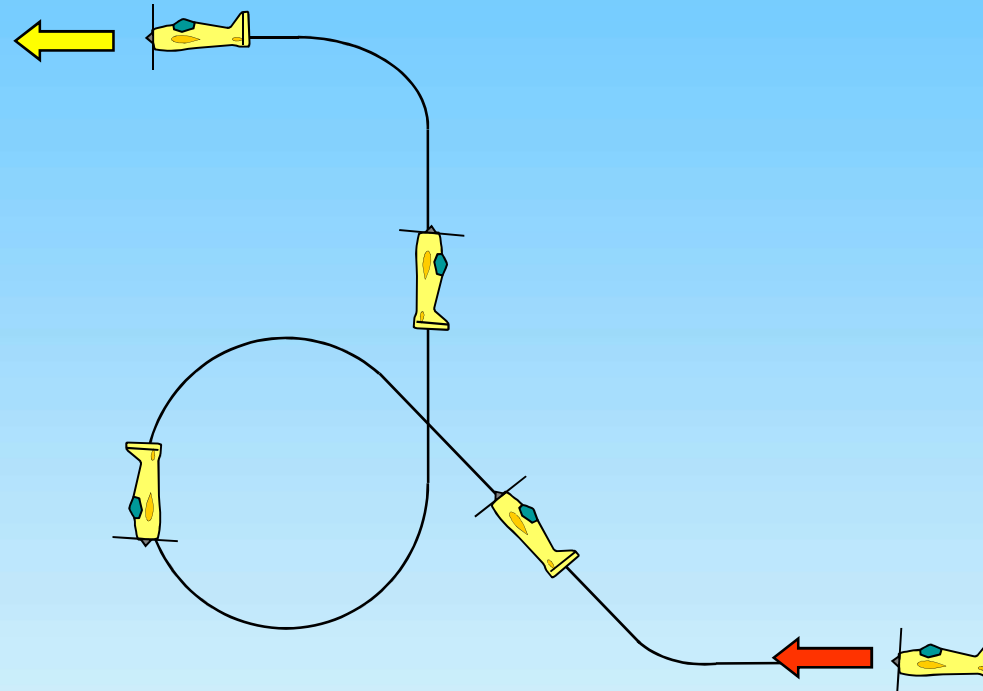
Rolls on middle of the line.

All radii are equal.





A-23.11 Reverse Figure ET

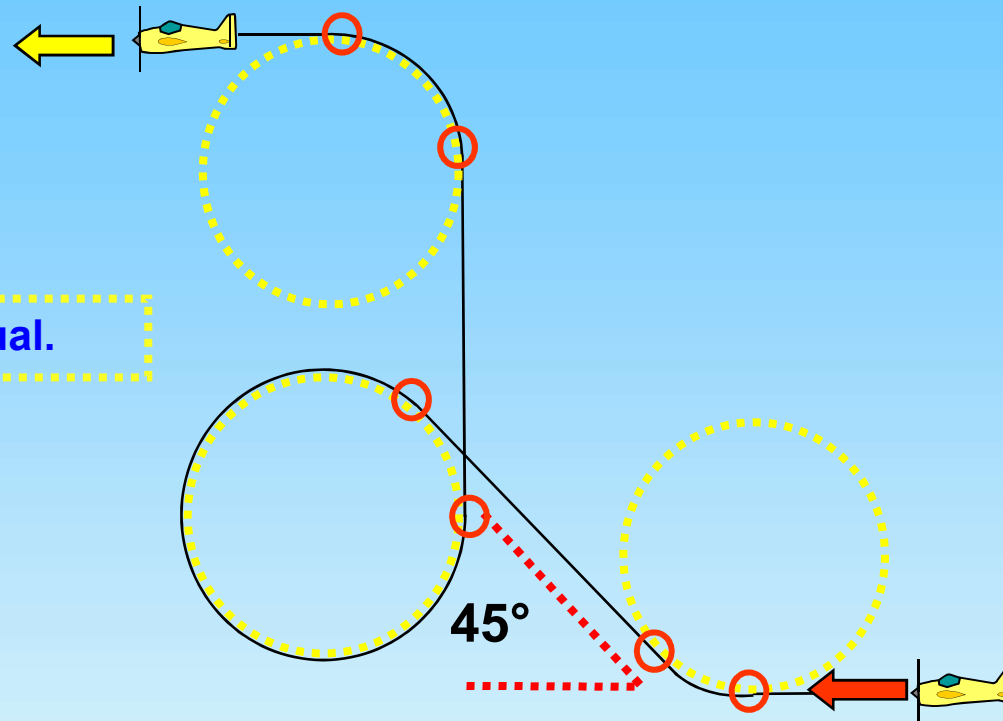


From upright pull through a one eighth loop into a forty five degree upline, push through a seven eighths loop into a vertical upline, push through a quarter loop , exit upright.
(Note: The vertical line must be in the center.)



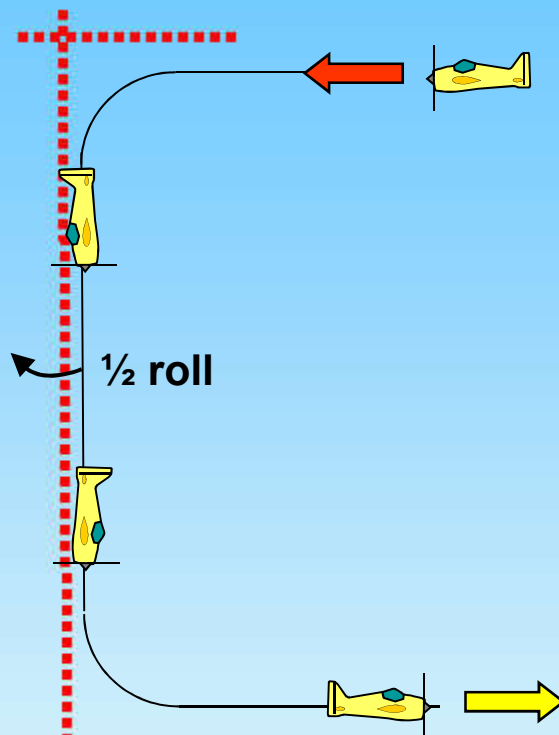
A-23.11 Reverse Figure ET

All radii are equal.





A-23.12 Half Square Loop with half roll

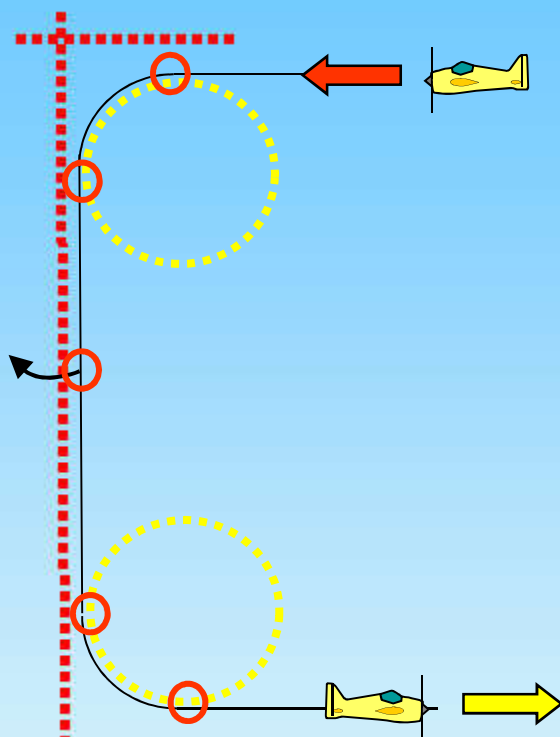


From upright push through a quarter loop into a vertical downline, perform a half roll, pull through a quarter loop, exit upright.





A-23.12 Half Square Loop with half roll



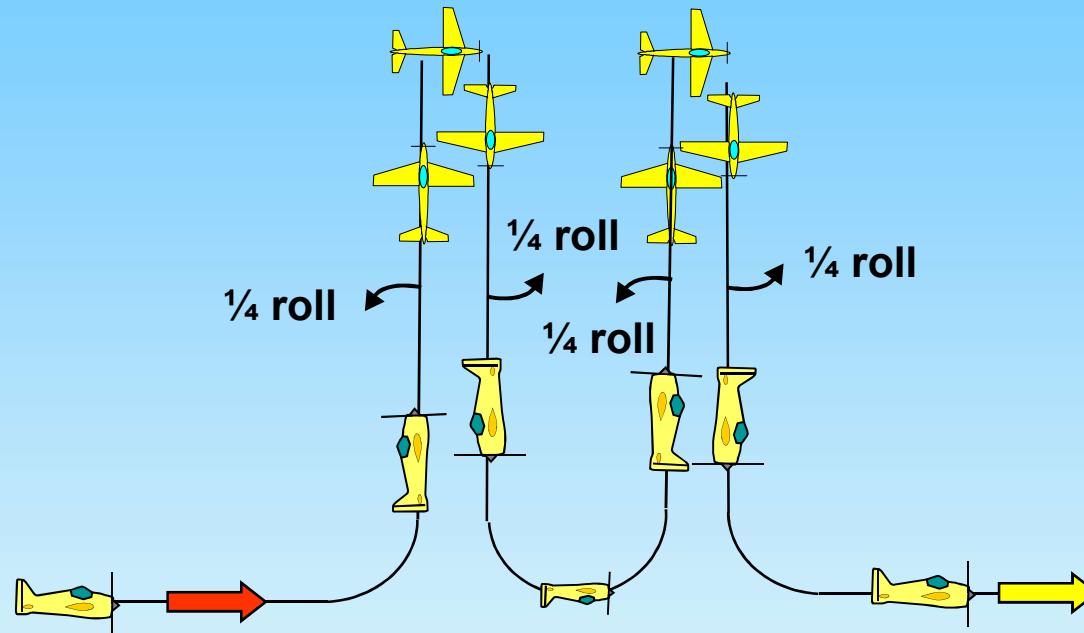
$\frac{1}{2}$ roll on middle of the line.

All radii are equal.





A-23.13 Figure M, with quarter rolls



From upright pull through a quarter loop into a vertical upline, perform a quarter roll, perform a stall turn into a vertical downline, perform a quarter roll, push through a half loop into a vertical upline, perform a quarter roll, perform a stall turn to a vertical downline, perform a quarter roll, pull through a quarter loop, exit upright.



A-23.13 Figure M, with quarter rolls

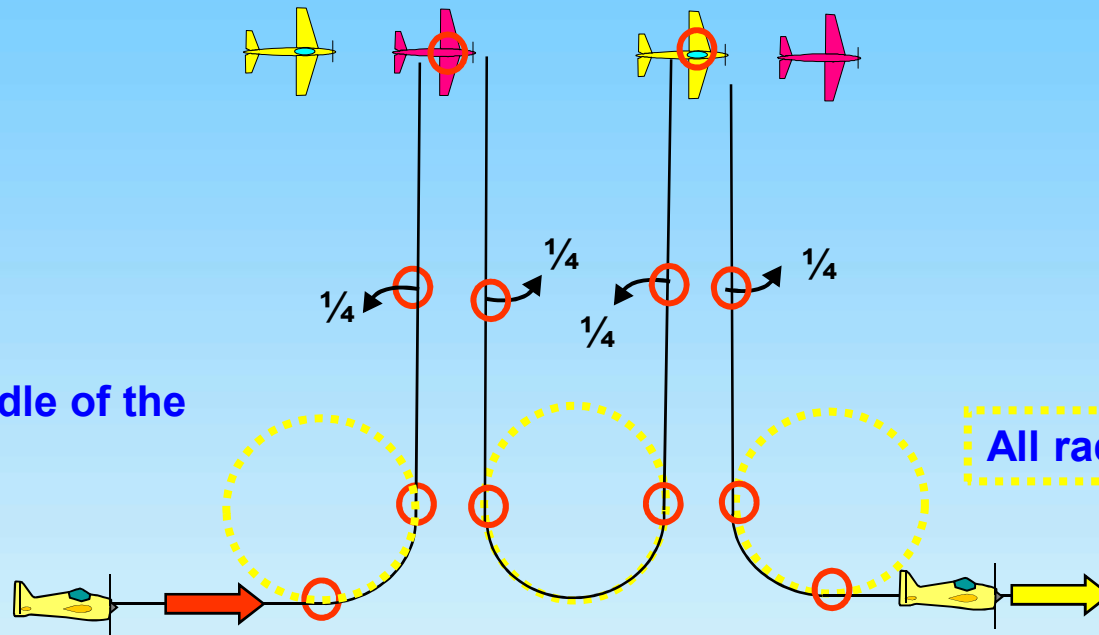
Stop before pivot

Pivot on CG

Two wing spans or more
— zero points!

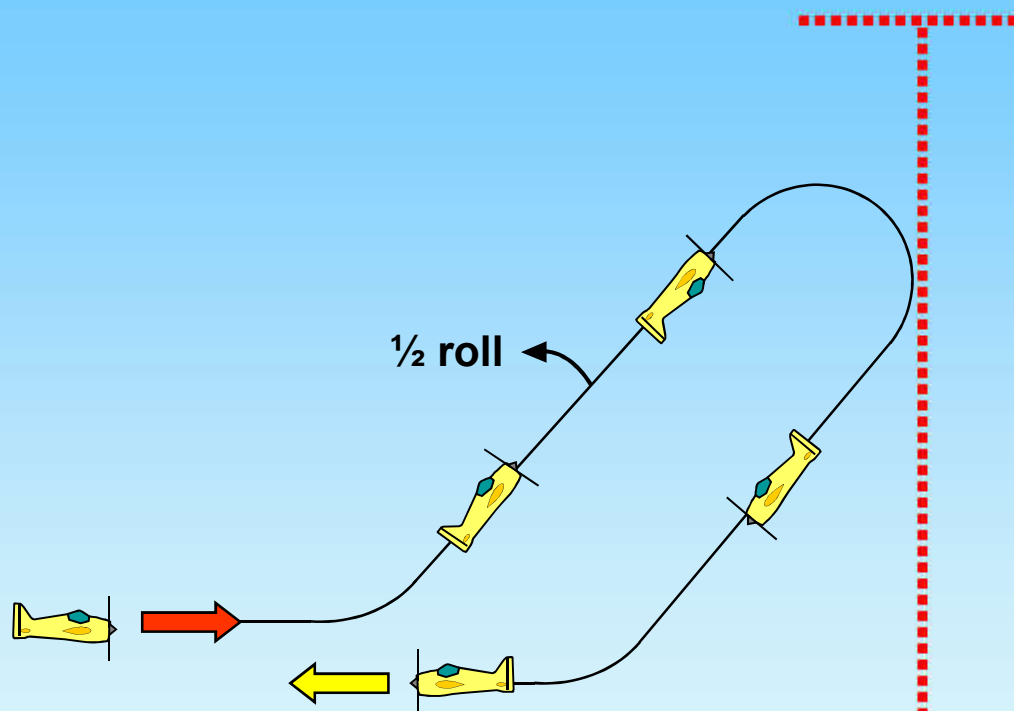
$\frac{1}{4}$ rolls on middle of the lines.

All radii are equal.





A-23.14 Trombone



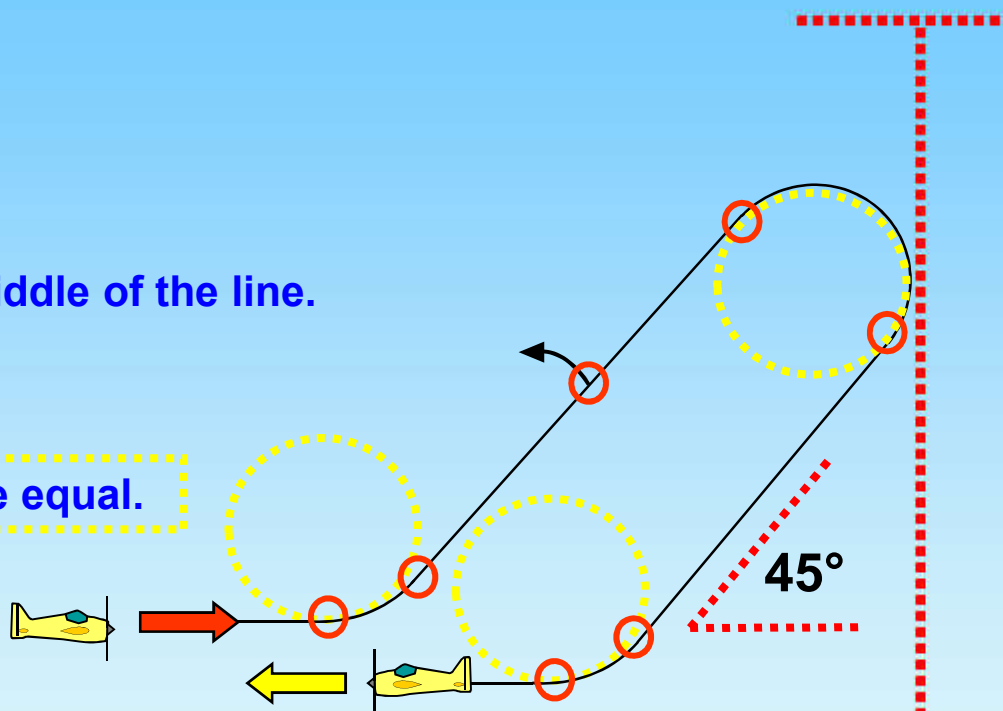
From upright pull through a one eighth loop into a forty five degree upline, perform a half roll, pull through a half loop into a forty five degree downline, pull through a one eighth loop, exit upright.



A-23.14 Trombone

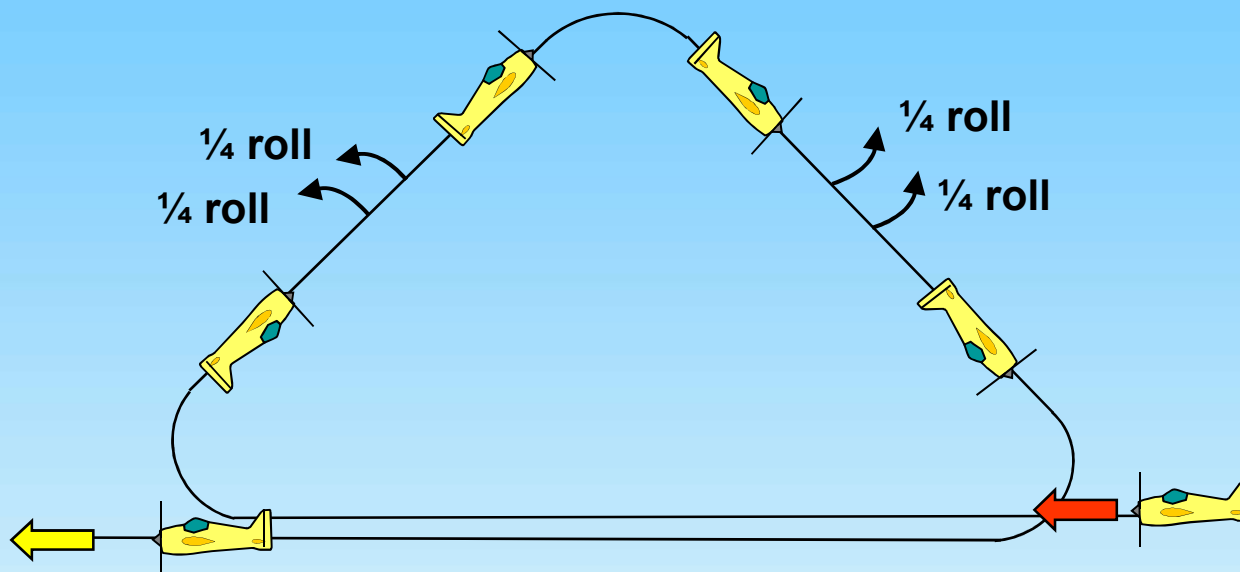
$\frac{1}{2}$ roll on middle of the line.

All radii are equal.





A-23.15 Triangle with two consecutive quarter rolls, two consecutive quarter rolls



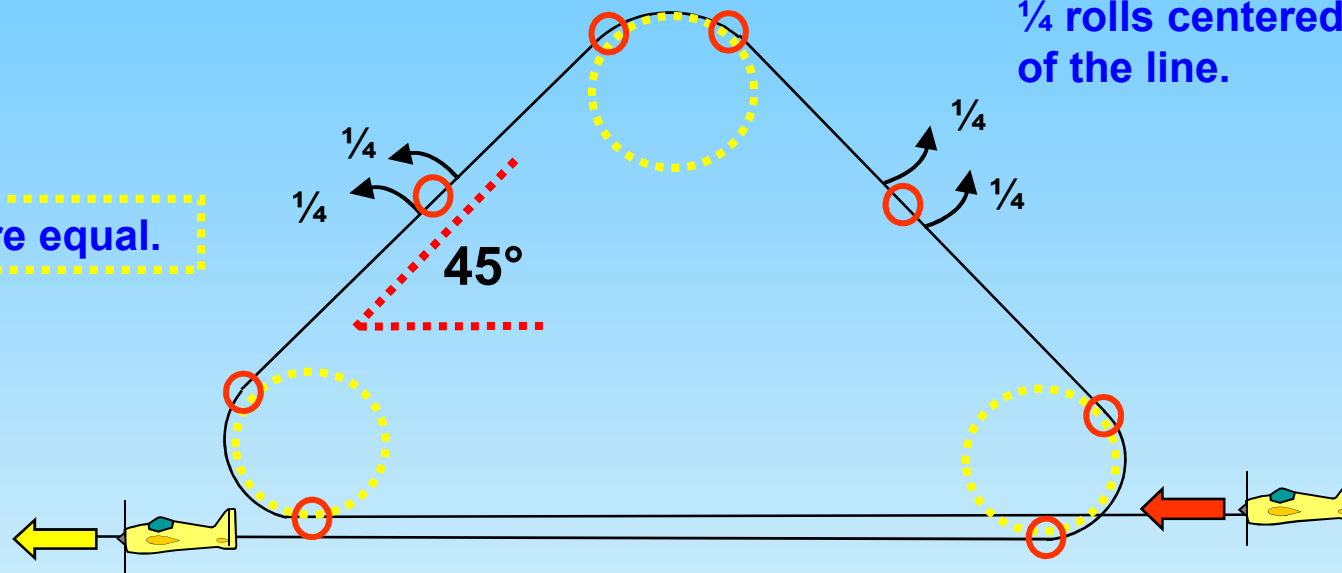
From upright, pull through a three eighths loop into a forty five degree upline, perform consecutively two quarter rolls, push through quarter loop into a forty five degree downline, perform consecutively two quarter rolls, pull through a three eighths loop, exit upright.



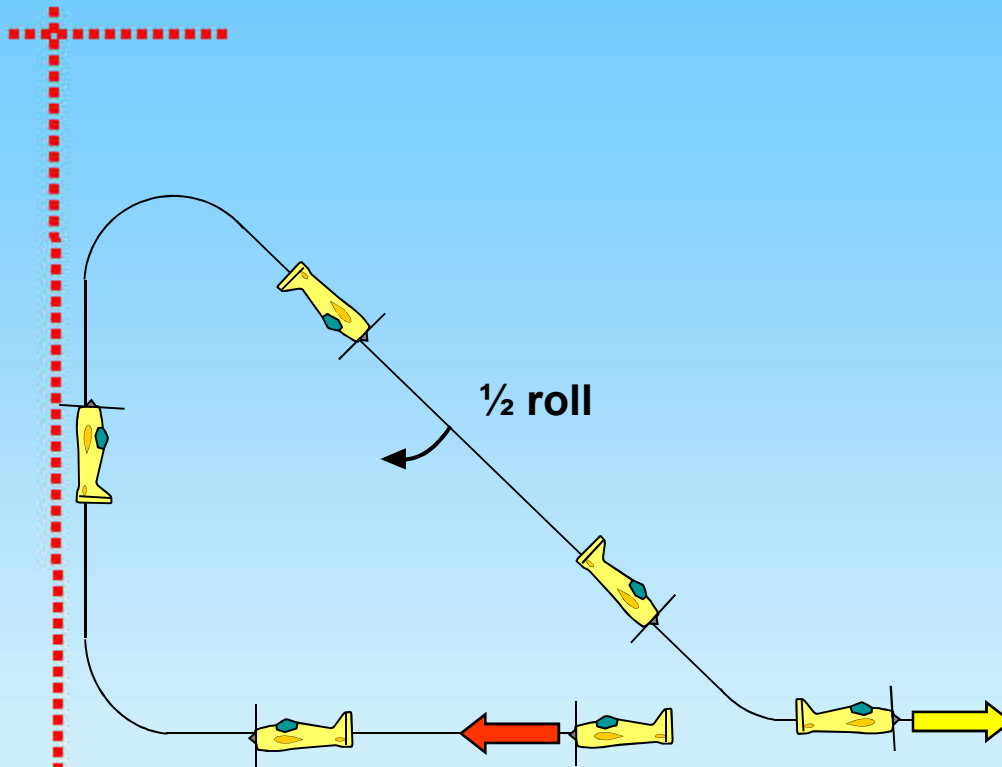
A-23.15 Triangle with two consecutive quarter rolls, two consecutive quarter rolls

All radii are equal.

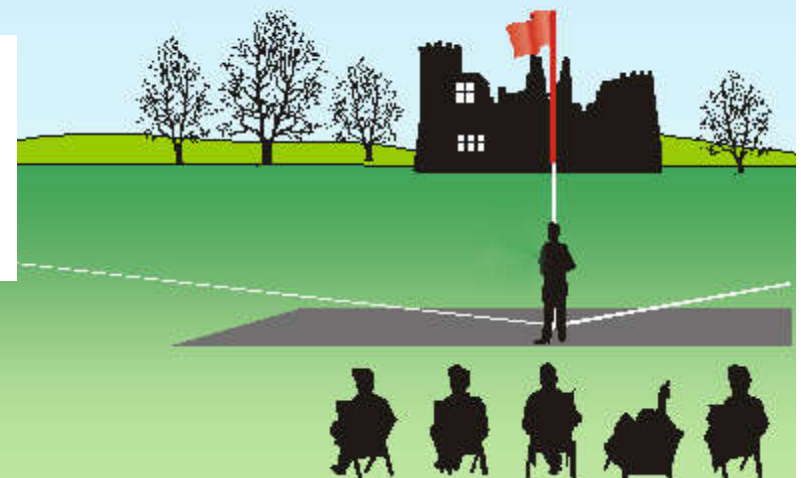
$\frac{1}{4}$ rolls centered on middle of the line.



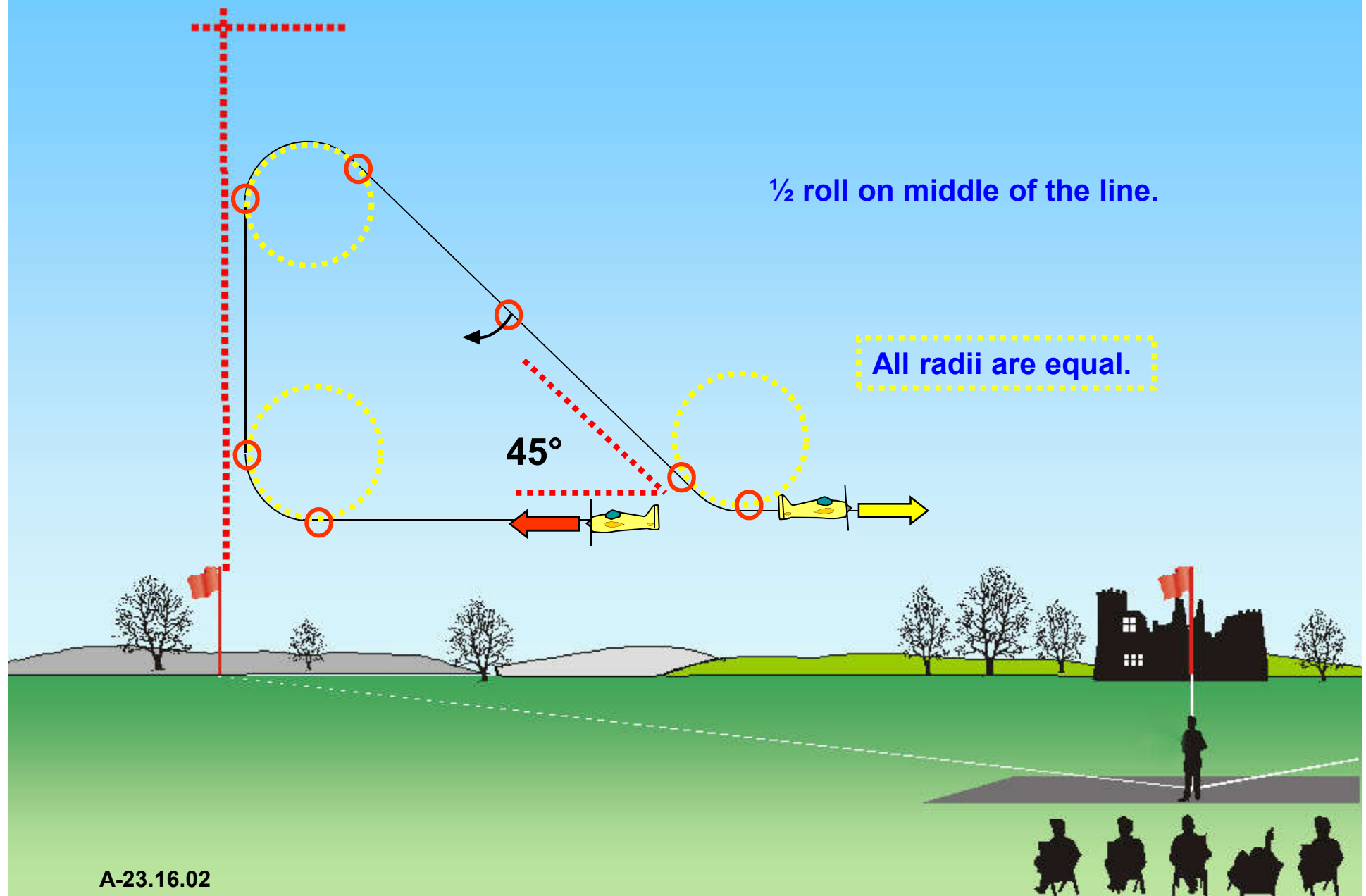
A-23.16 Reverse Shark Fin with half roll



From upright pull through a quarter loop into a vertical upline, pull through a three eighths loop into a forty five degree downline, perform a half roll, pull through a one eighth loop, exit upright.

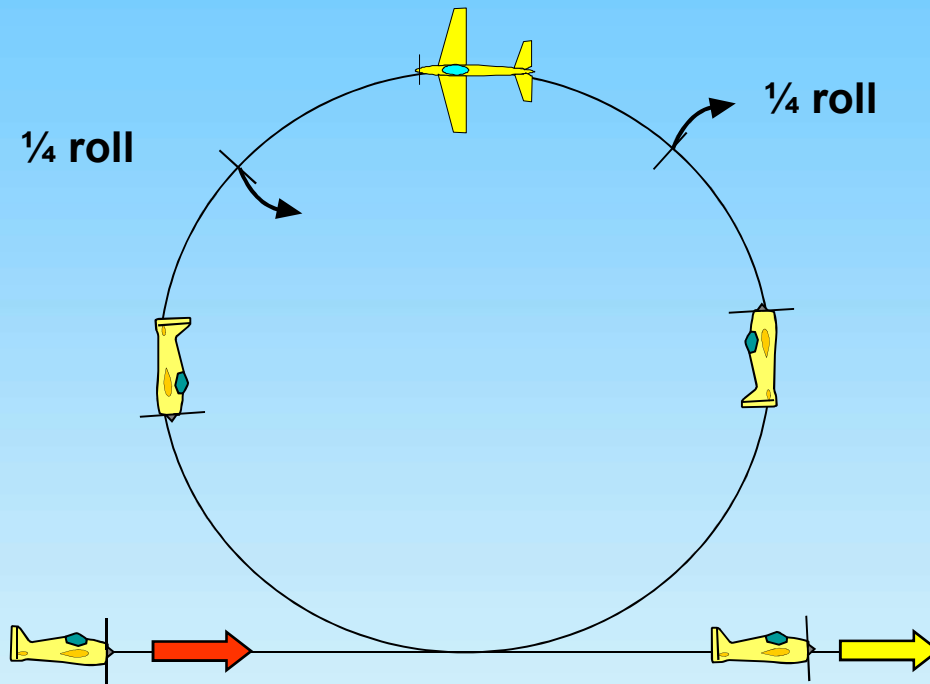


A-23.16 Reverse Shark Fin with half roll





A-23.17 Loop with Knife-Edge Flight



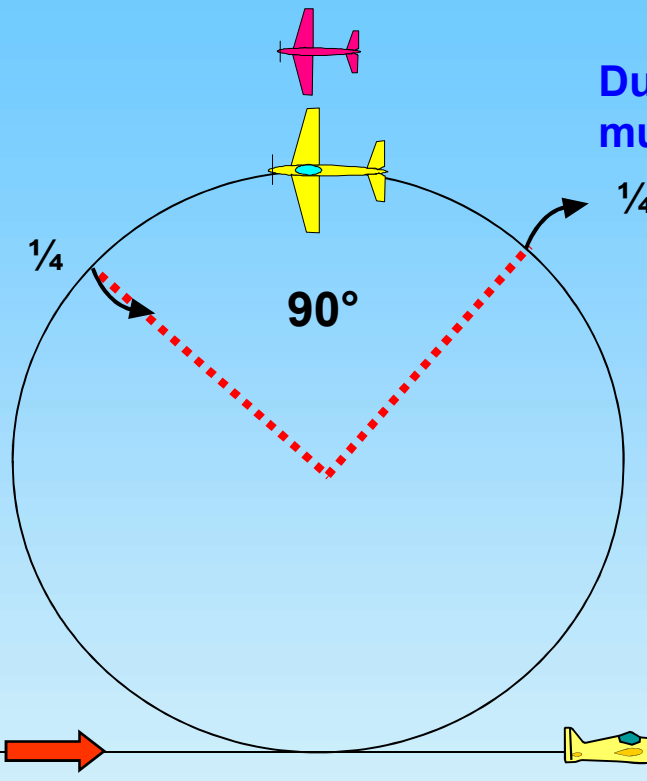
From upright pull through a loop with a knife-edge flight over the top ninety degrees, exit upright.



A-23.17 Loop with Knife-Edge Flight

Loop must be round.

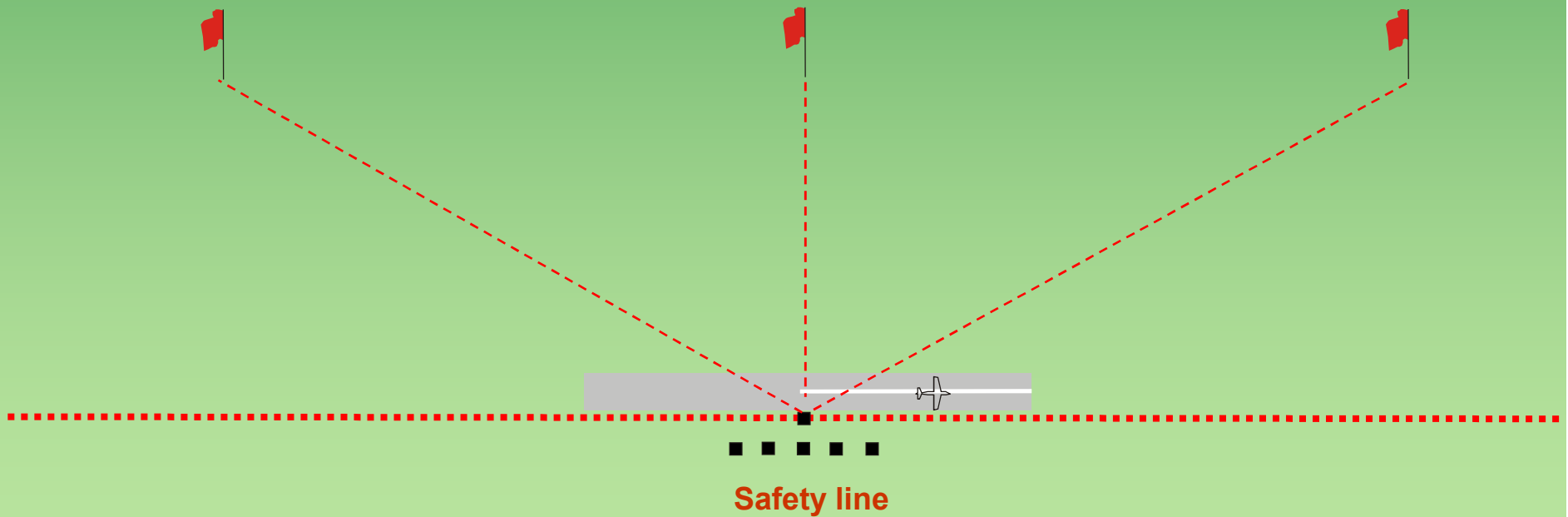
During Knife Edge the wing must be in the vertical plane.





Landing procedure (not judged, not scored)

The direction of the landing may be different to the take off.



Forget **WHO** is flying

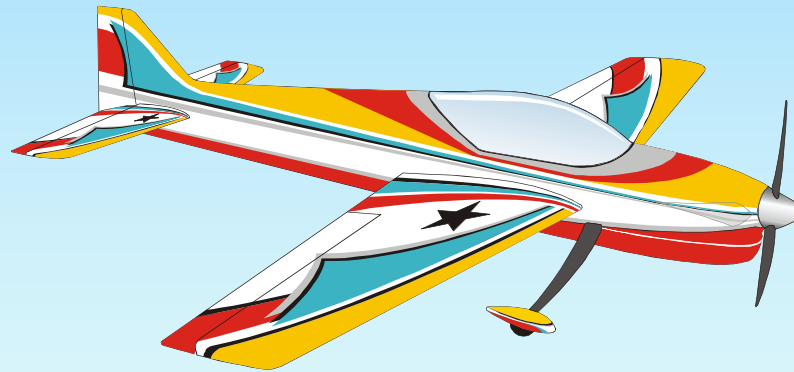
(friend, rival, countryman, flier from other nation)

Forget **WHAT** is flying

(2-stroke, 4-stroke, electric)

LOOK ONLY AT LINES DESCRIBED IN THE SKY!

Bob Skinner



Thank you!

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