



Flying and Judging F3A



Taitolennokit FAI F3A

NORDIC N-13
NORDIC N-13



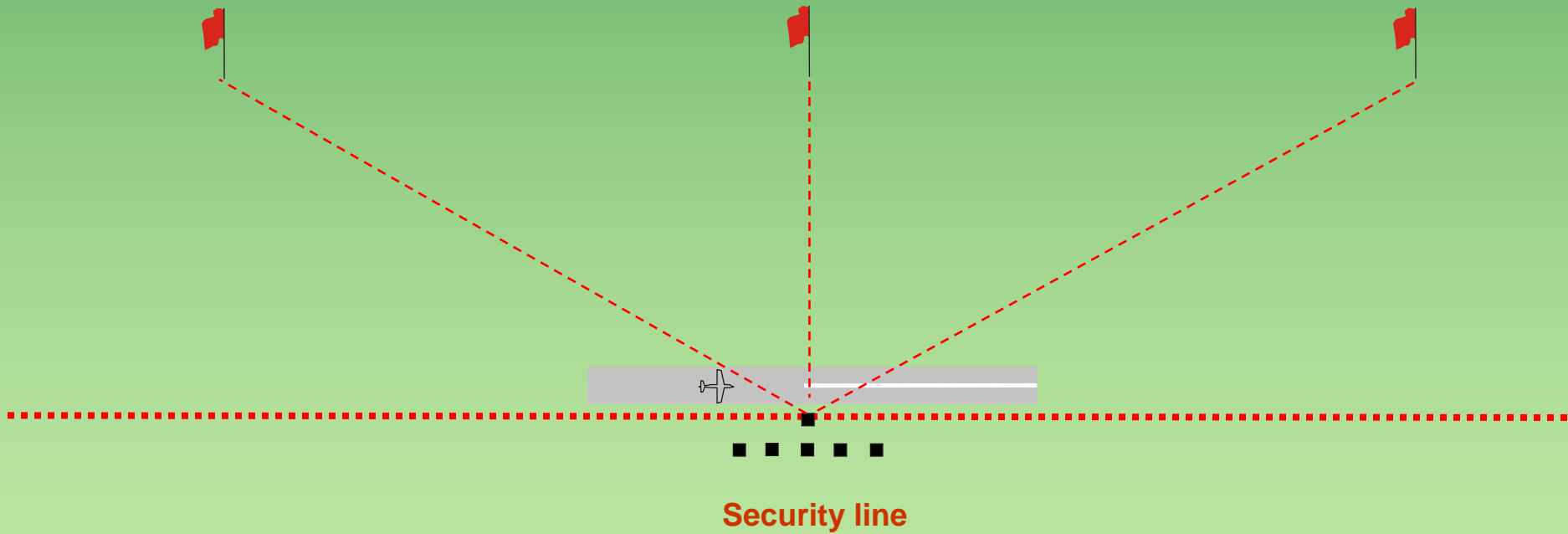
SCHEMATIC MANOEUVRE ILLUSTRATIONS

NORDIC SCHEDULE N-13



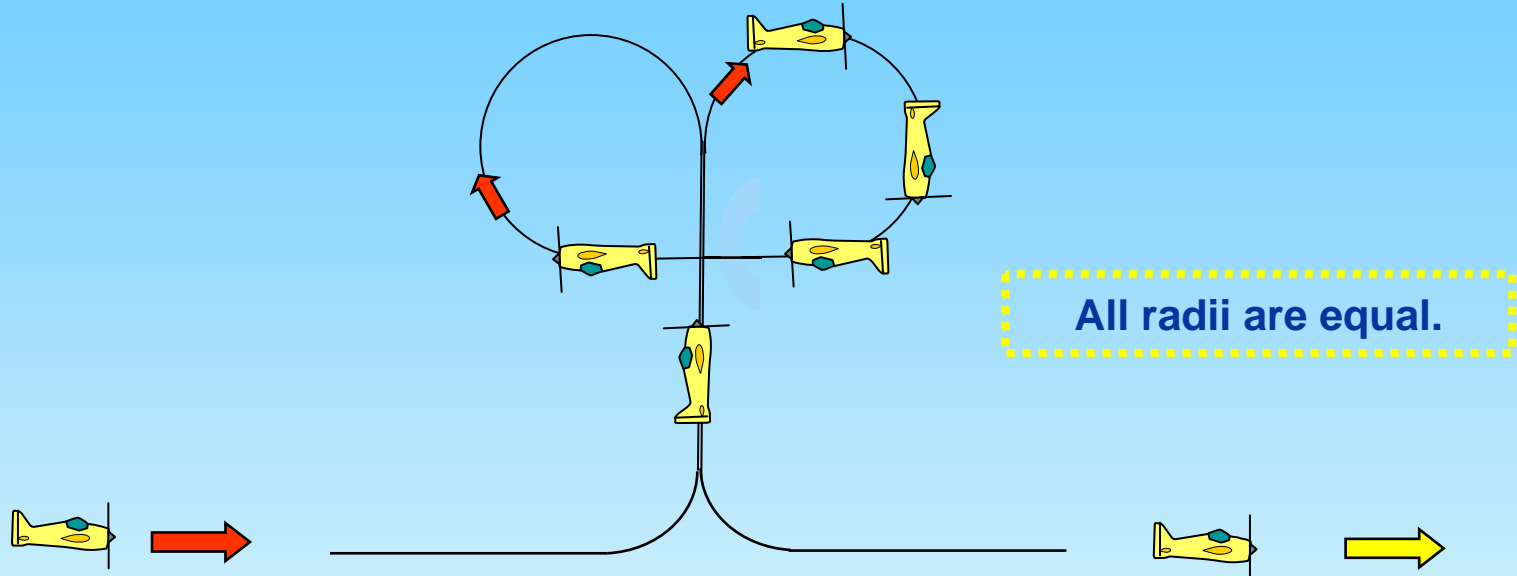
Take-off procedure (not judged, not scored)

← wind



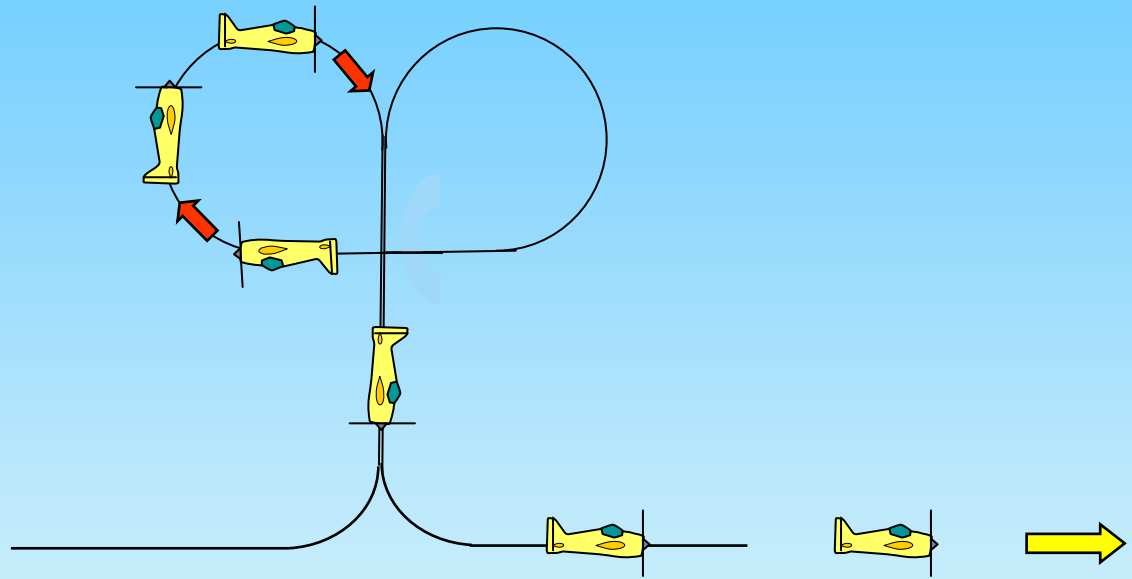


N-13.01: Half Clover Leaf





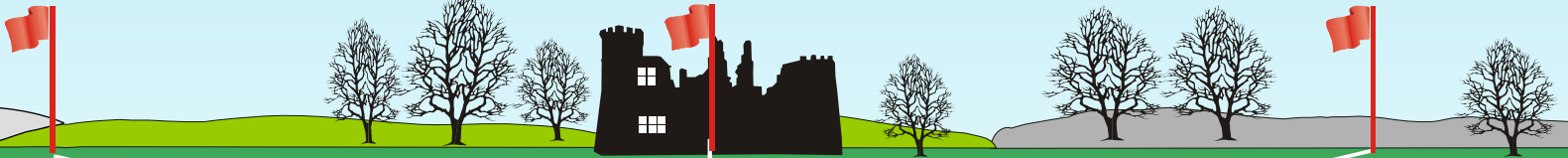
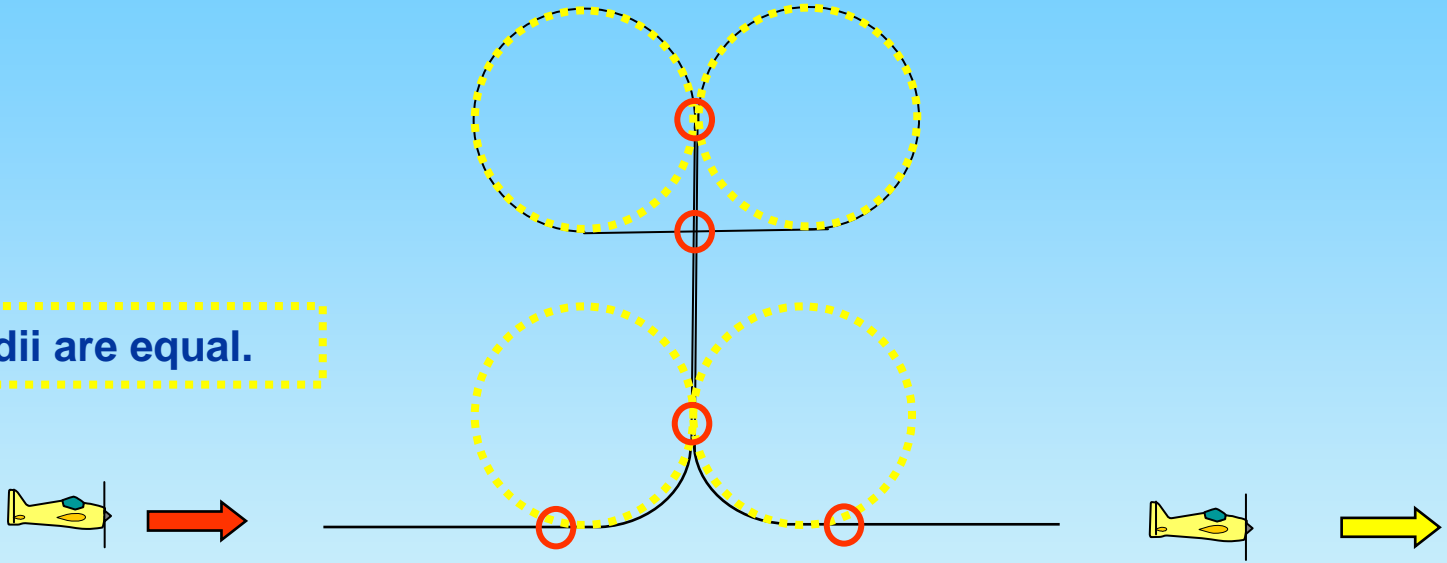
N-13.01: Half Clover Leaf





N-13.01: Half Clover Leaf

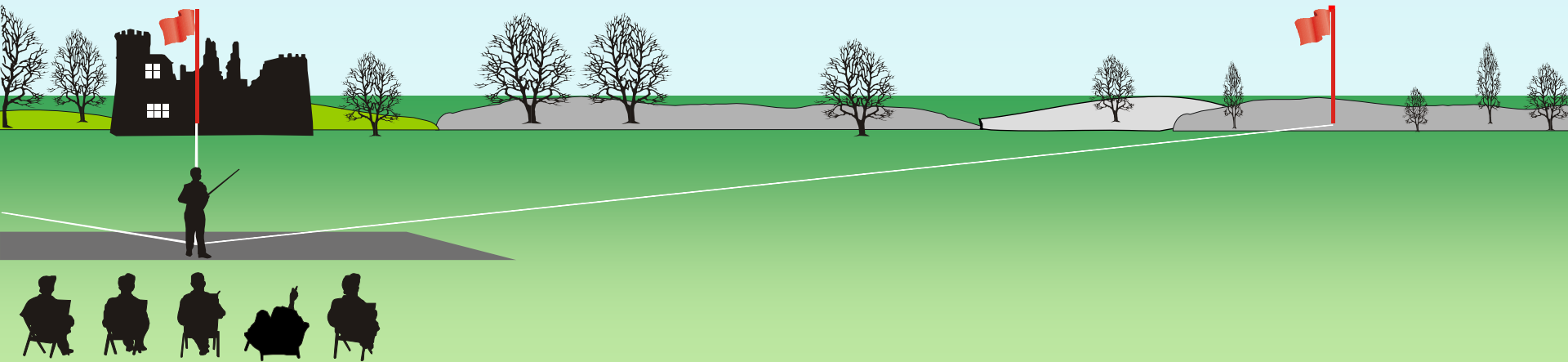
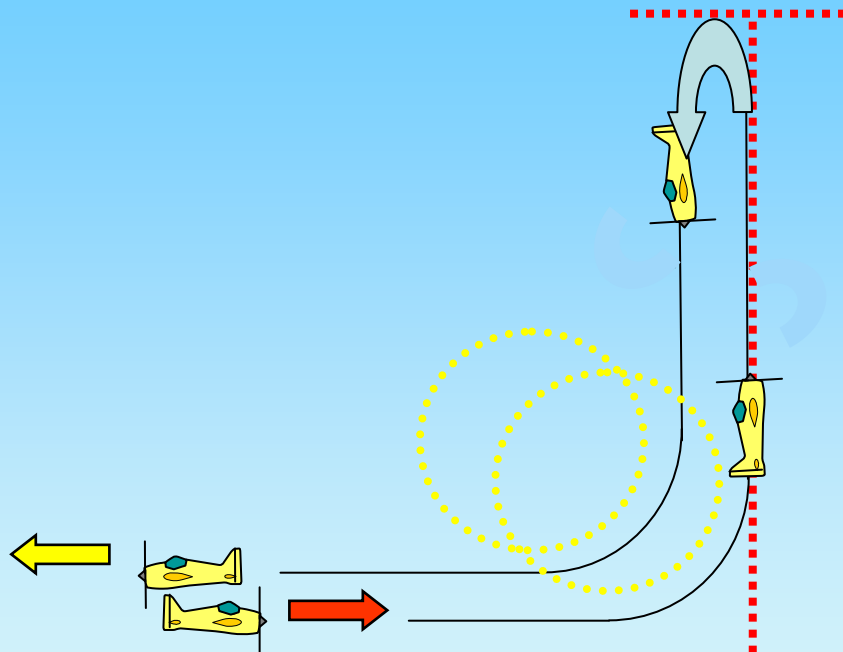
All radii are equal.





N-13.02: Stall Turn. From upright, pull through a $\frac{1}{4}$ loop into a vertical upline, perform a stall turn into a vertical downline, pull through a $\frac{1}{4}$ loop, exit upright.

All radii are equal.

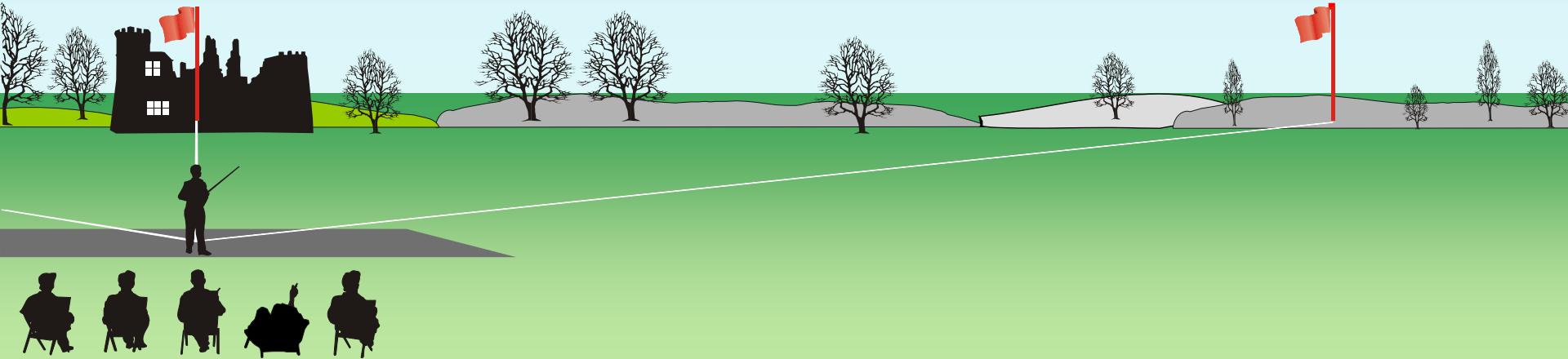
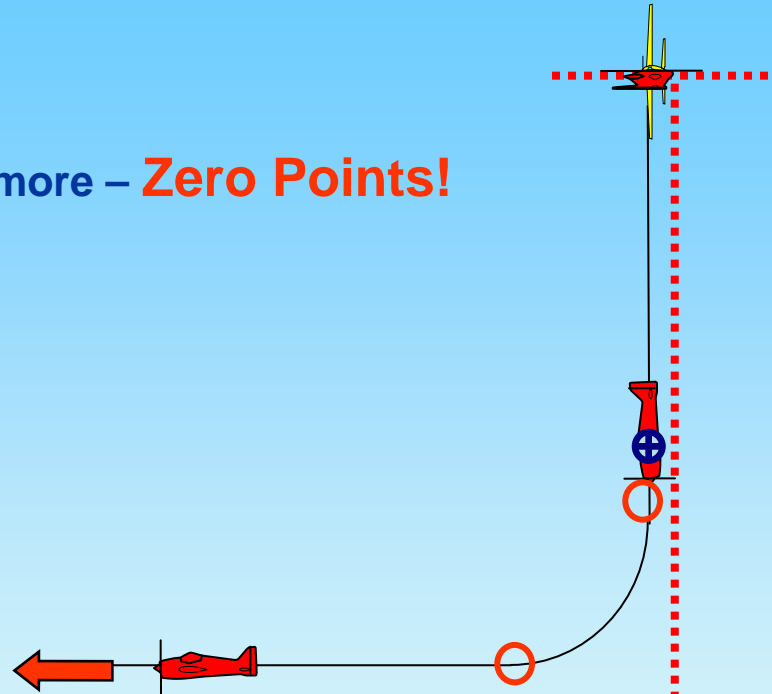




N-13.02: Stall Turn

Pivot on CG ⊕

Two wing spans or more – **Zero Points!**



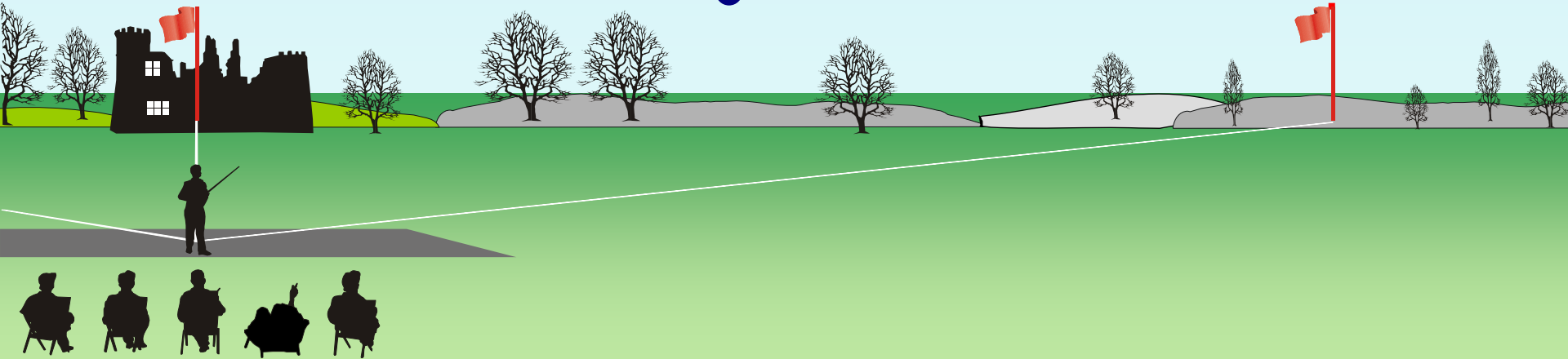
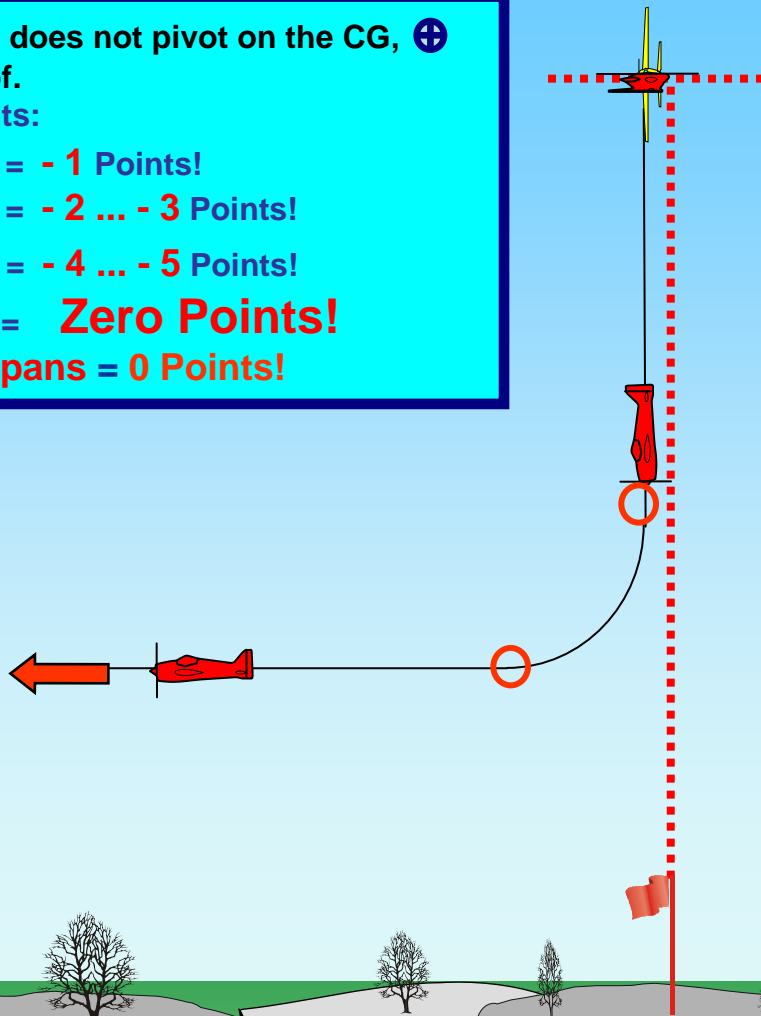
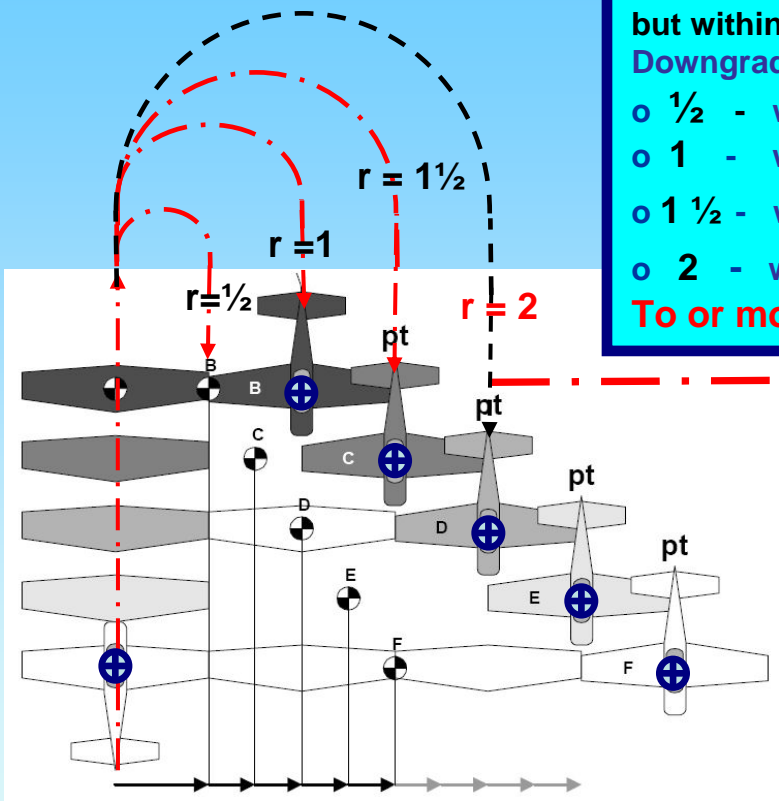


N-13.02: Stall Turn

IF the model aircraft does not pivot on the CG, ⊕
but within a radius of.

Downgraded to Points:

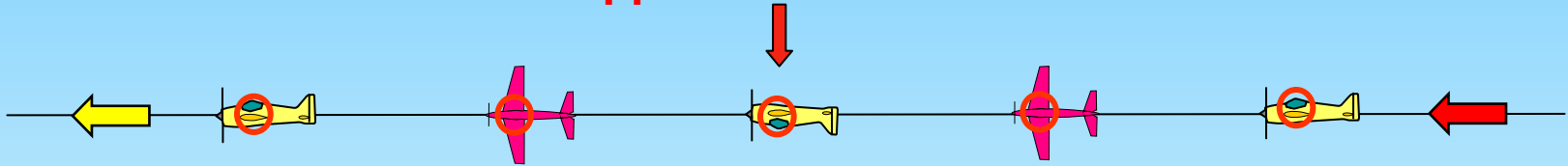
- 1/2 - wingspans = - 1 Points!
 - 1 - wingspans = - 2 ... - 3 Points!
 - 1 1/2 - wingspans = - 4 ... - 5 Points!
 - 2 - wingspans = **Zero Points!**
- To or more wingspans = 0 Points!**





N-13.03: Roll Combination with consecutive two $\frac{1}{4}$ rolls, two $\frac{1}{4}$ rolls in opposite direction.
From upright, perform consecutively two $\frac{1}{4}$ rolls, $\frac{1}{4}$ rolls in opposite direction, exit upright

The 2 x two $\frac{1}{4}$ rolls in opposite direction must have the same roll rate.



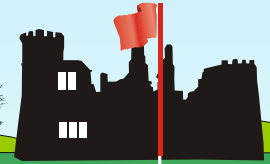
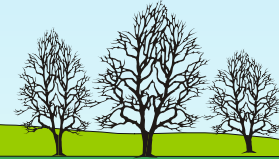
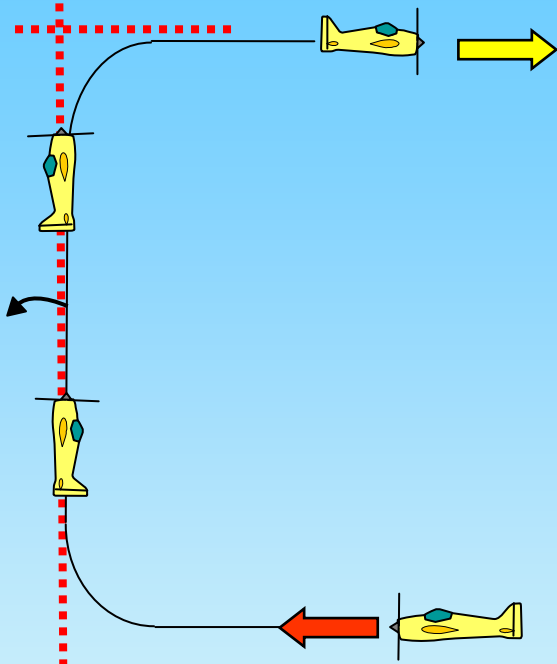
Lines between part rolls must be short and of equal length.



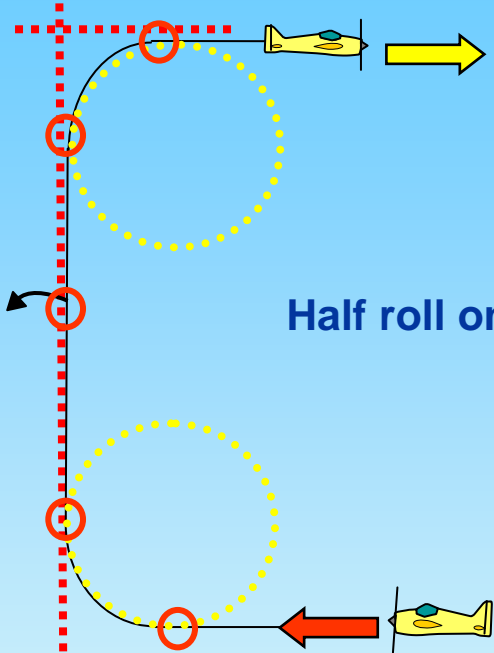
N-13.04: Half Square loop with 1/2 roll



1/2 roll

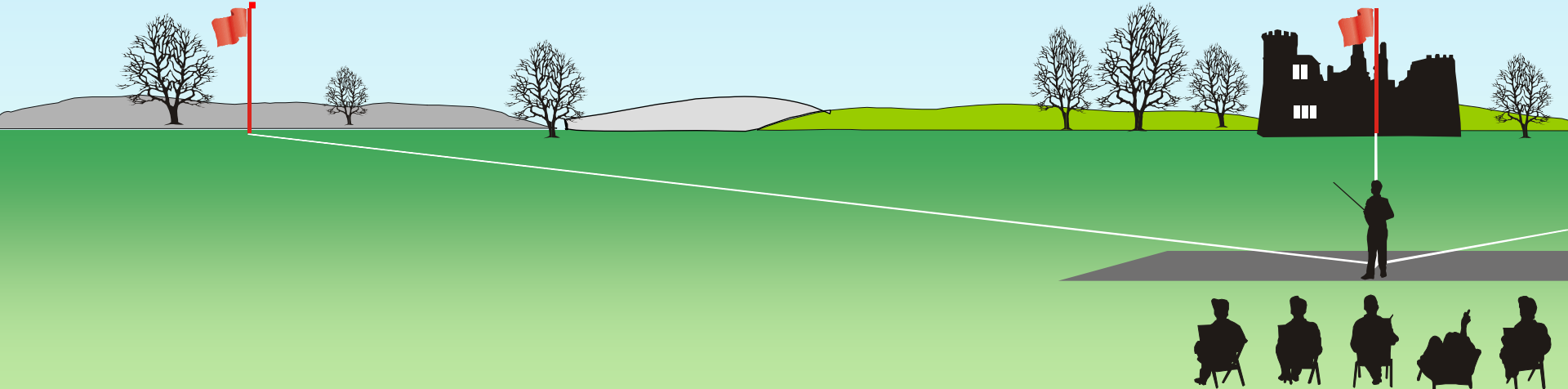


N-13.04: Half square loop with $\frac{1}{2}$



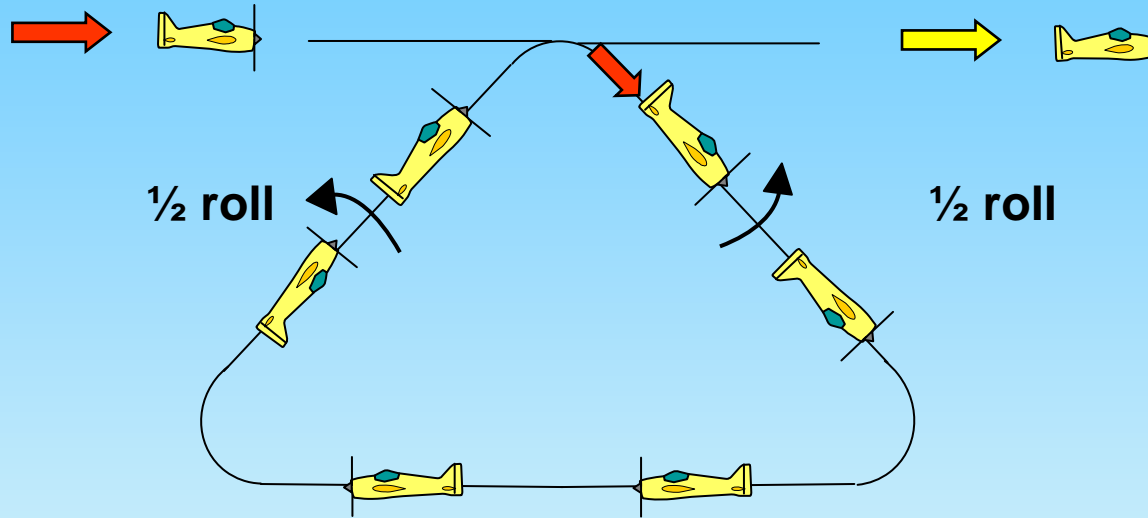
Half roll on middle of the line.

All radii are equal.



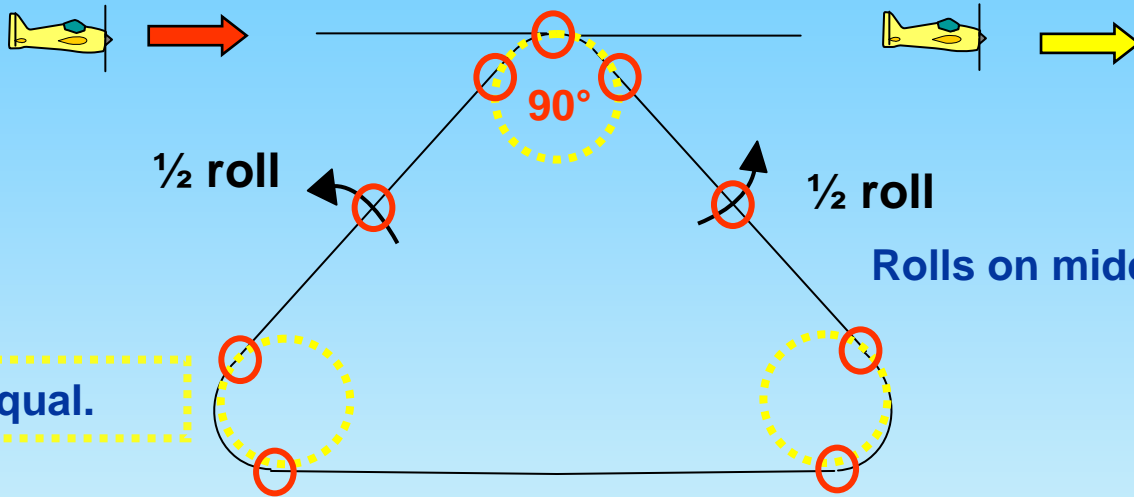


N-13.05: Triangle with two 1/2 rolls. From upright, push through a 1/8 loop into a 45° downline, perform 1/2 roll, pull through a 3/8 loop into a horizontal line, pull through a 3/8 loop into a 45° upline, perform 1/2 roll, push through a 1/8 loop, exit upright.





N-13.05: Triangle with two $\frac{1}{2}$ rolls. From upright, push through a $\frac{1}{8}$ loop into a 45° downline, perform $\frac{1}{2}$ roll, pull through a $\frac{3}{8}$ loop into a horizontal line, pull through a $\frac{3}{8}$ loop into a 45° upline, perform $\frac{1}{2}$ roll, push through a $\frac{1}{8}$ loop, exit upright.



$\frac{1}{2}$ roll

$\frac{1}{2}$ roll

Rolls on middle of the lines.

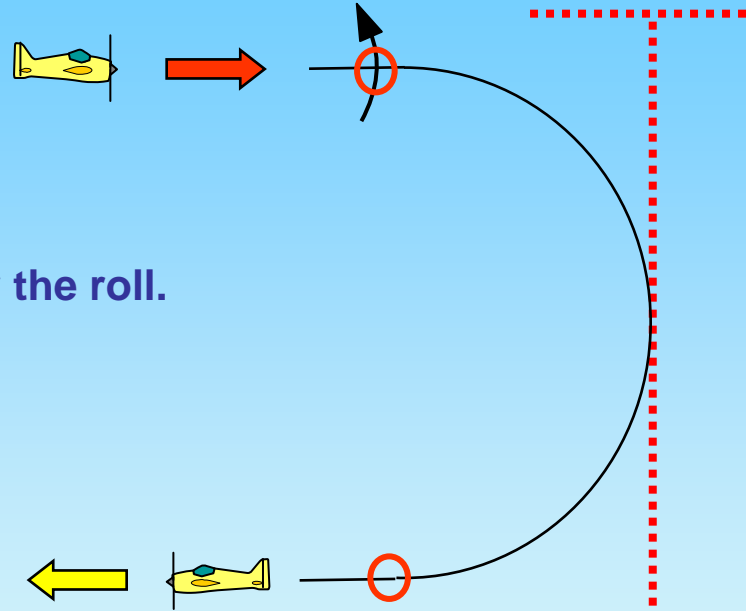
All radii are equal.



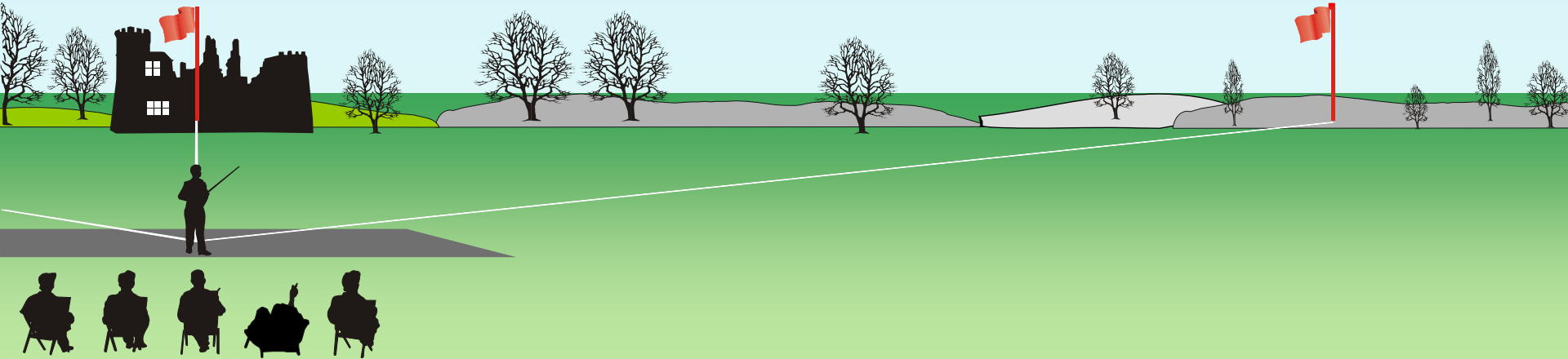
N-13.06: Split S with $\frac{1}{2}$ roll



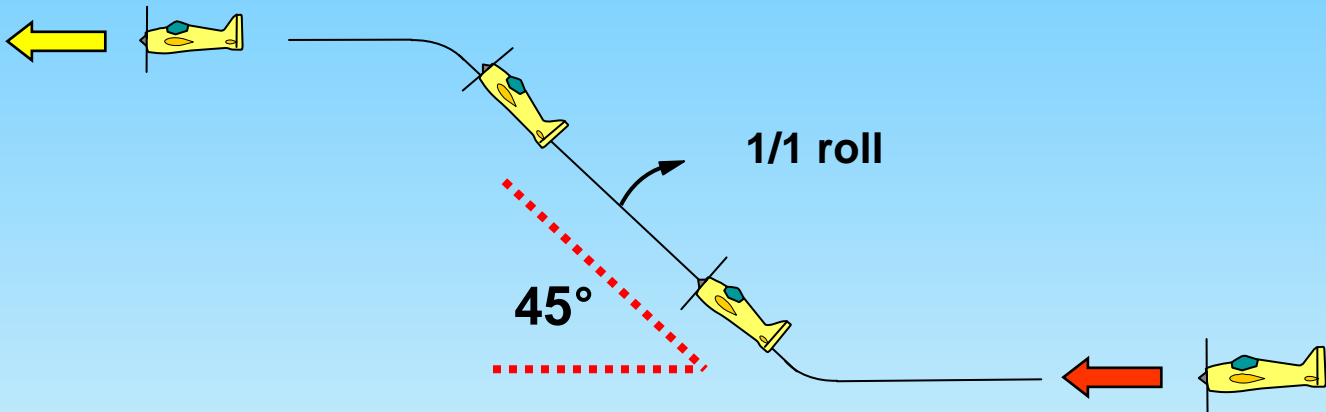
$\frac{1}{2}$ roll



Half loop immediately after the roll.

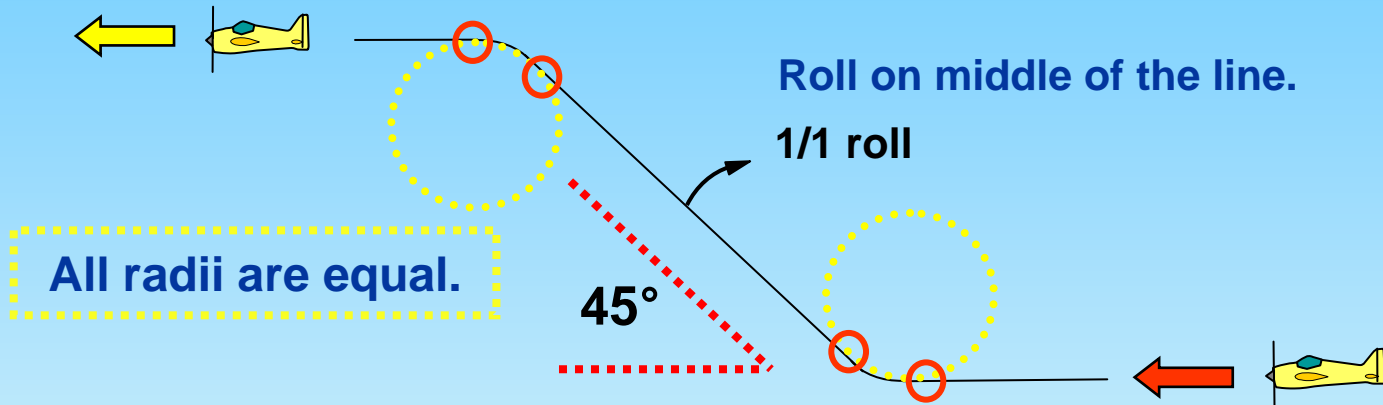


N-13.07: 45° Upline with roll

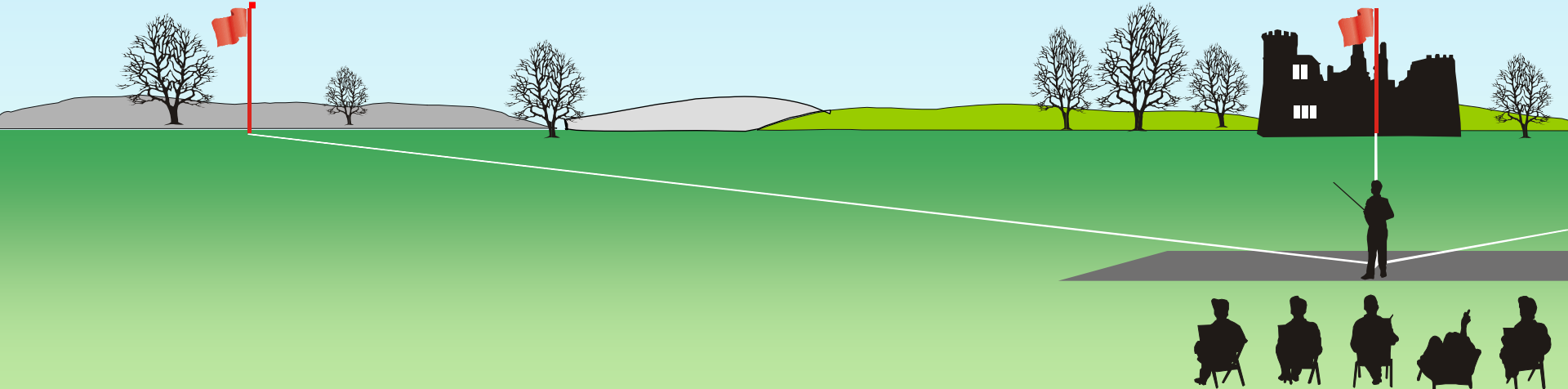
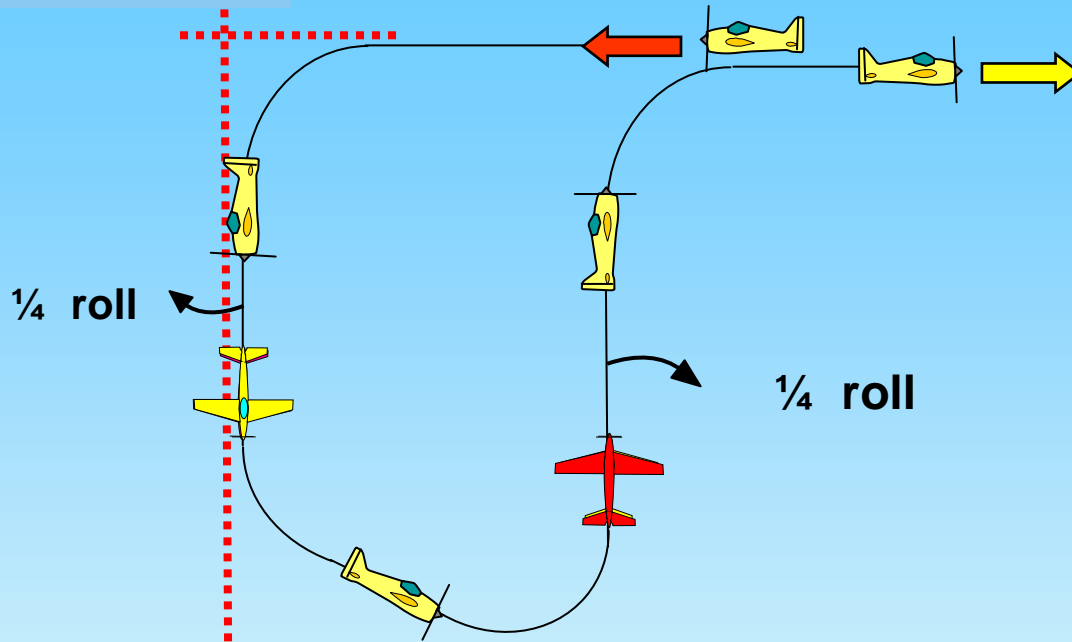




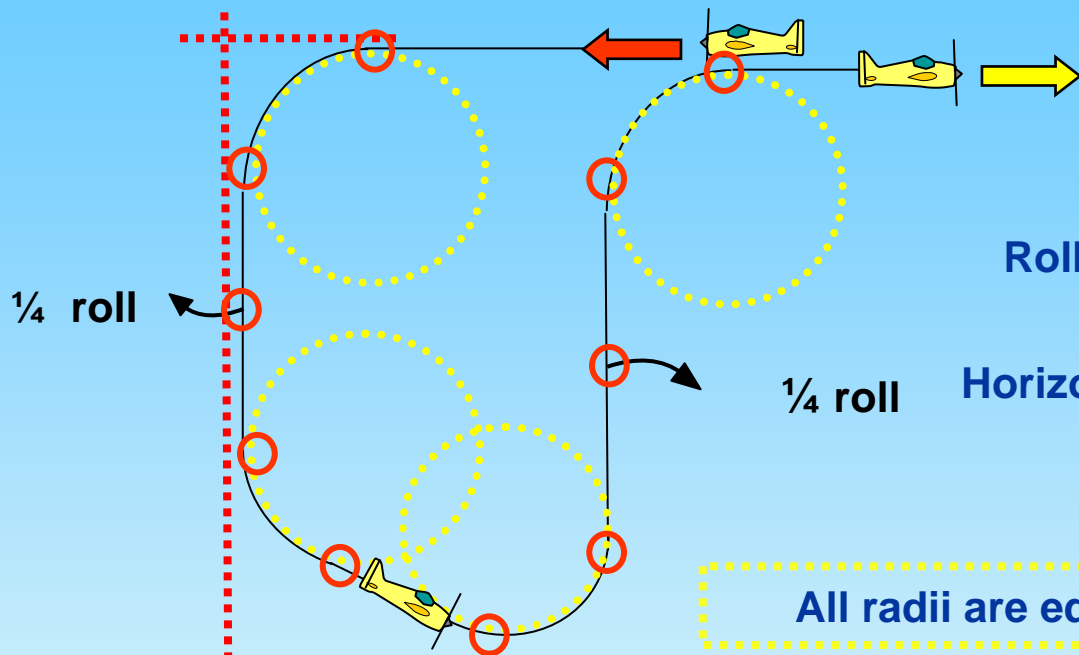
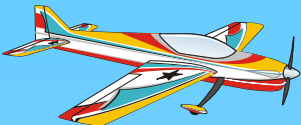
N-13.07: 45° Upline with roll



N-13.08: Reverse Top Hat with $\frac{1}{4}$ roll down, $\frac{1}{4}$ roll up. From upright, push through a $\frac{1}{4}$ loop into a vertical downline, perform a $\frac{1}{4}$ roll, pull through a $\frac{1}{4}$ loop into a horizontal line, pull through a $\frac{1}{4}$ loop into a vertical upline, perform a $\frac{1}{4}$ roll, push through a $\frac{1}{4}$ loop, exit upright.



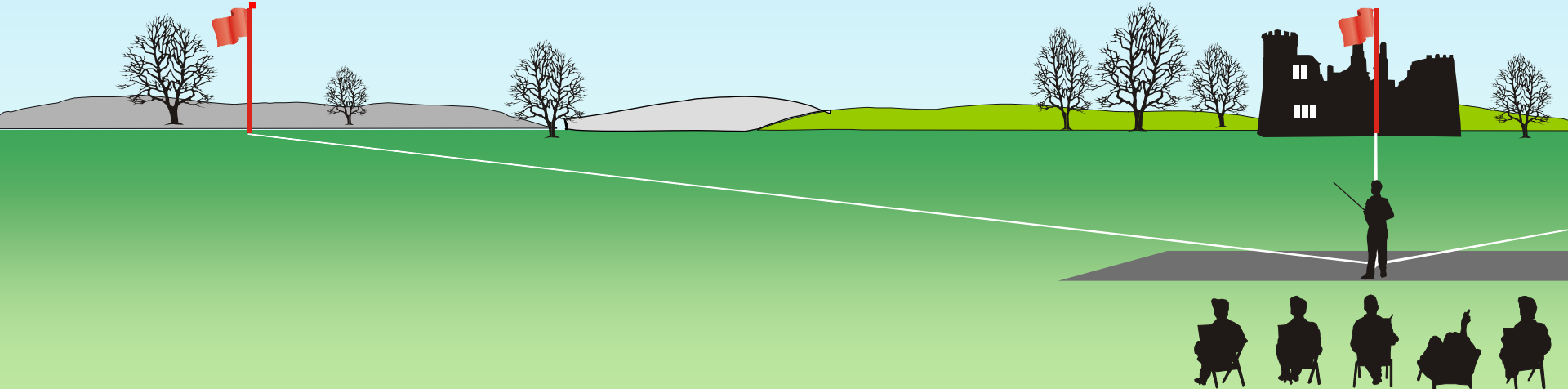
N-13.08: Reverse Top Hat with $\frac{1}{4}$ roll down, $\frac{1}{4}$ roll up

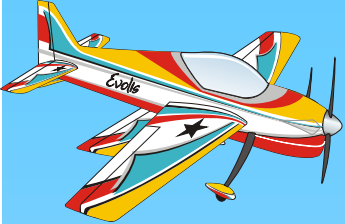


Rolls in middle of the lines.

Horizontal cross box must be upright.

All radii are equal.





N-13.9: Spin with 3 turns. From upright, perform an upright spin with 3 turns, perform a vertical downline, pull through a ¼ loop, exit upright.

Nose-up attitude increases

Stall.... nose and wing drops... rotation starts

Level entry

Nose-up attitude

Spin with 3 turns

Model aircraft spins around CG ⊕

Snap entry - zero points!

Forced entry: downgrade.

Spiral dive - 0 points!

STOP, with no over- or under-spin

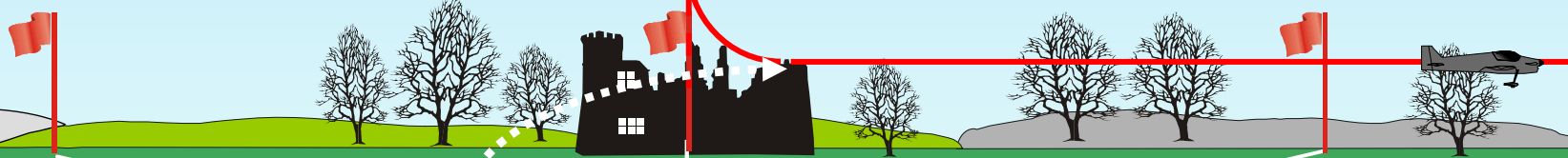
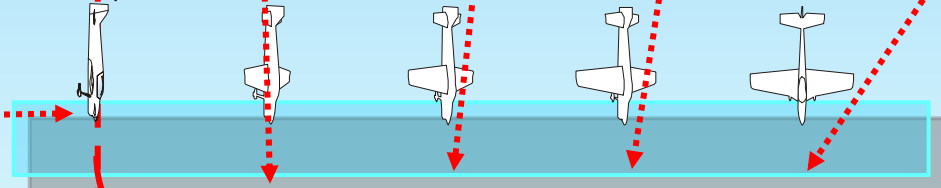


**30° to 45°
...minus 3!**

**15° to 30°
...minus 2!**

**90°
overspin
...minus 6!**

**Up to 15°
...minus 1!**

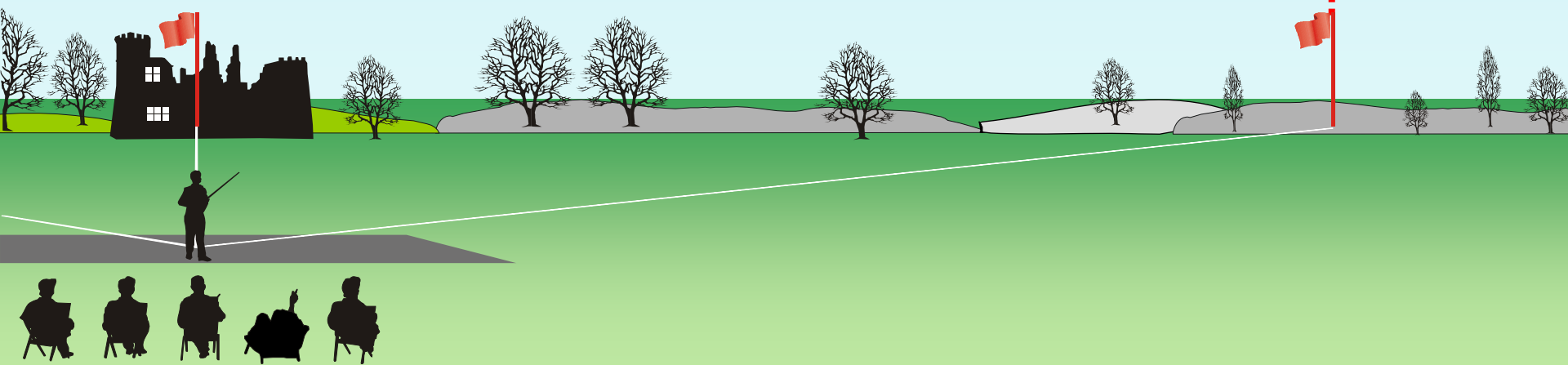
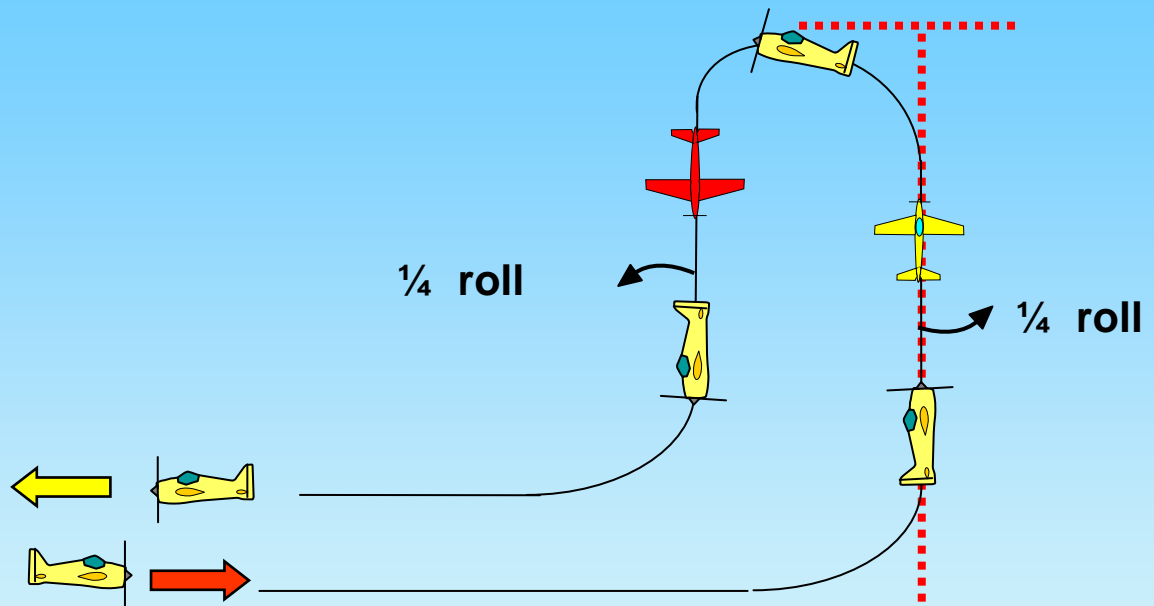


Vertical downline after spin





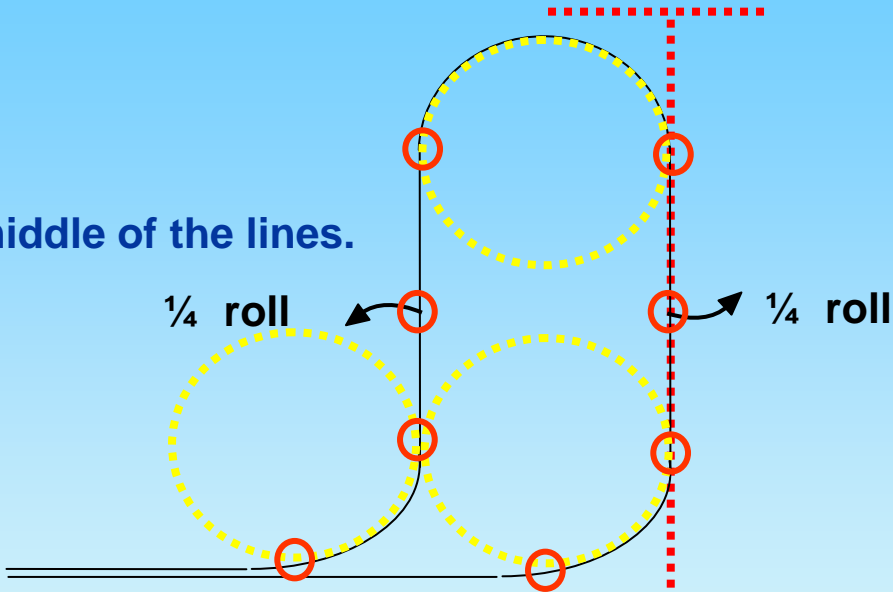
N-13.10: Pull-Push-Pull Humpty Bump with $\frac{1}{4}$ roll up, $\frac{1}{4}$ roll down (Option : Consecutive two $\frac{1}{4}$ rolls up)



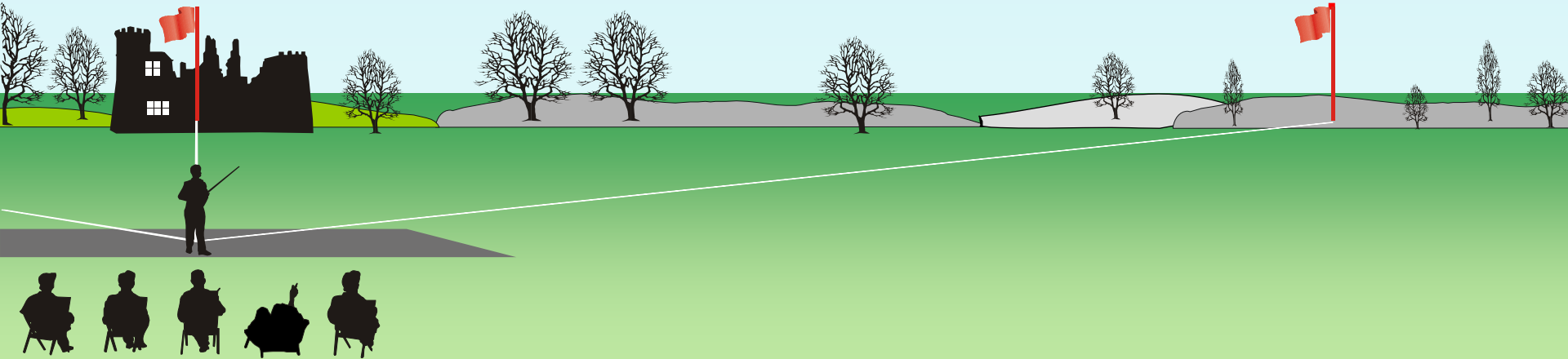


N-13.10: Pull-Push-Pull Humpty-Bump with $\frac{1}{4}$ roll up, $\frac{1}{4}$ roll down (Option: Two $\frac{1}{4}$ rolls up)

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



All radii are equal.

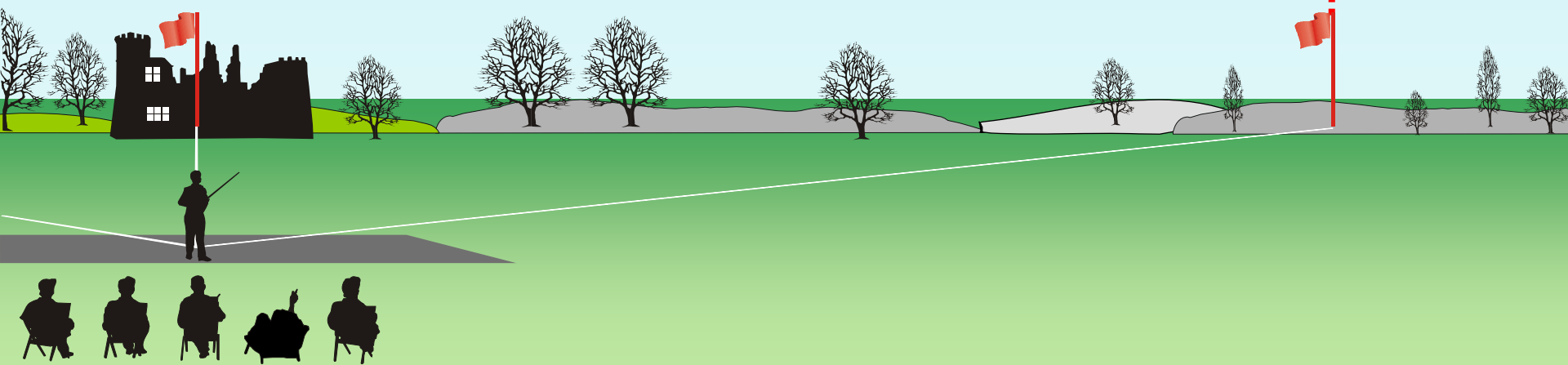
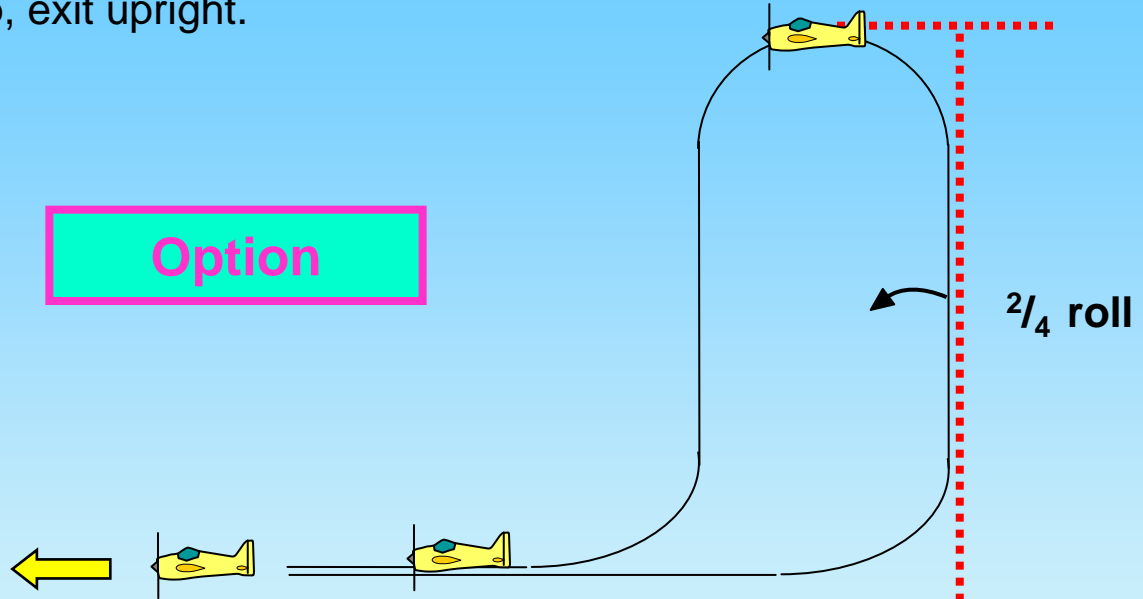




N-13.10: Pull-Push-Pull Humpty Bump with $\frac{1}{4}$ roll up, $\frac{1}{4}$ roll down

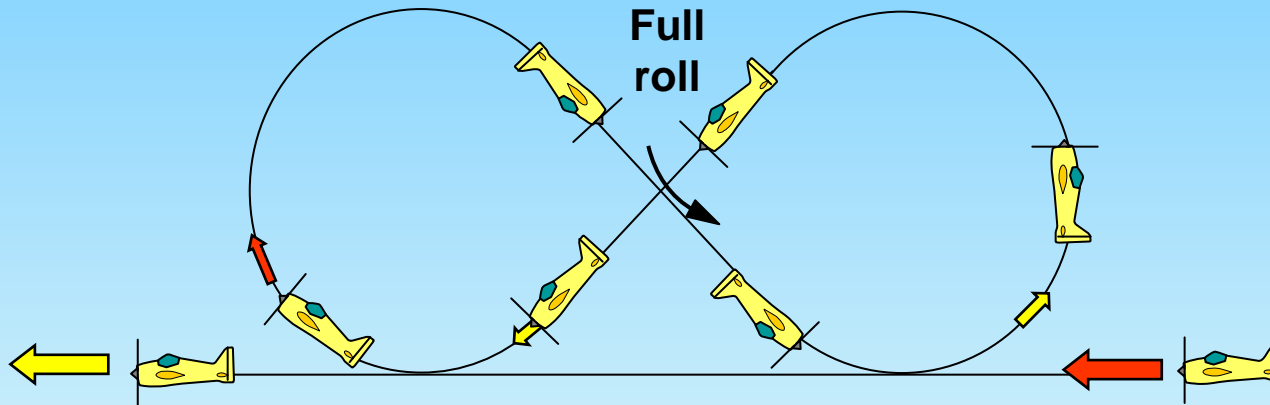
Option: From upright, pull through a $\frac{1}{4}$ loop into a vertical upline, perform two consecutive $\frac{1}{4}$ rolls, push through a $\frac{1}{2}$ loop into a vertical downline, pull through a $\frac{1}{4}$ loop, exit upright.

Option



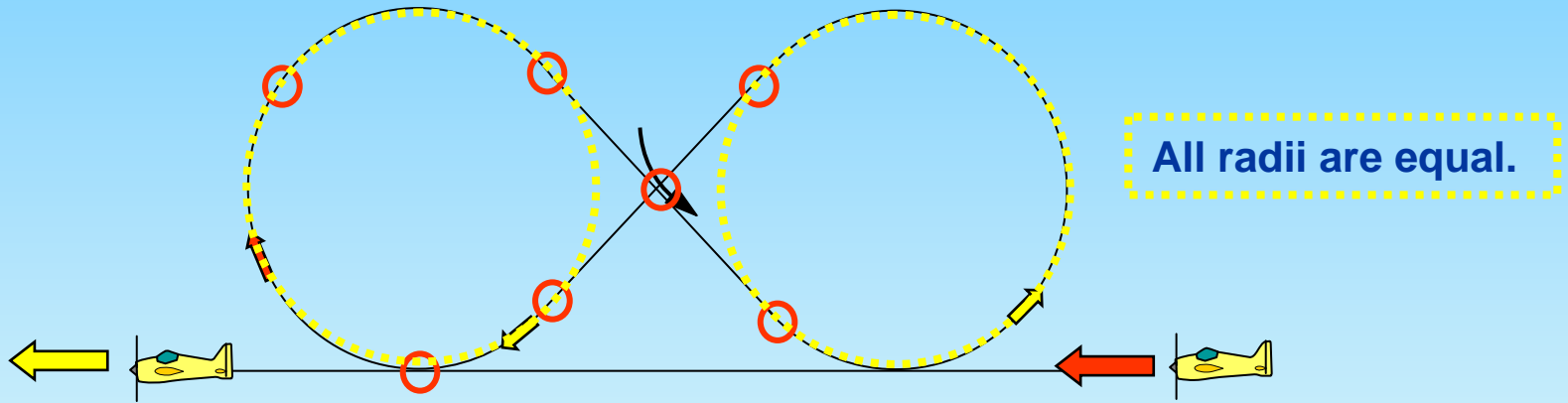


N-13.11: Cuban 8 with roll. From upright, pull through a $\frac{5}{8}$ loop into a 45° downline, push through a $\frac{3}{4}$ loop into another 45° downline, perform a roll, pull through a $\frac{1}{8}$ loop, exit upright.

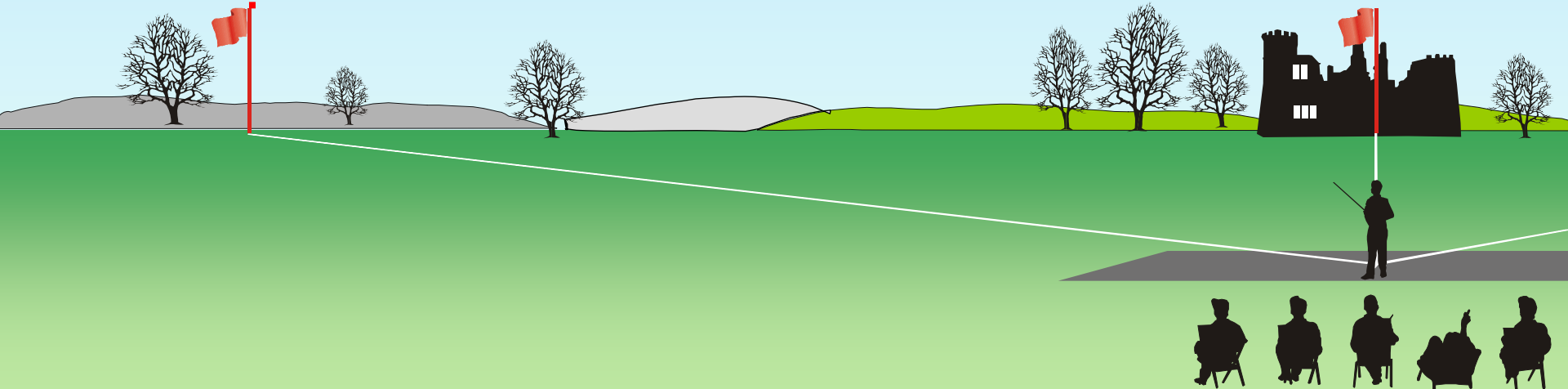
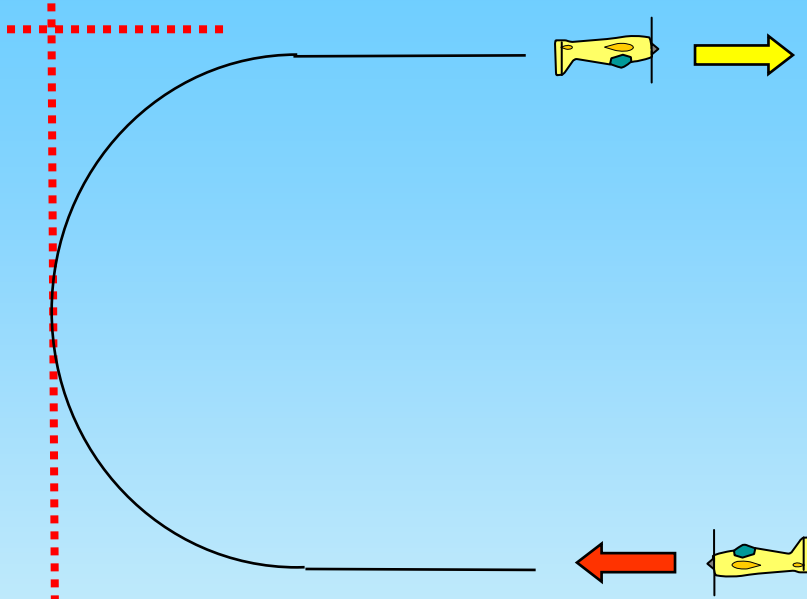




N-13.11: Cuban 8 with roll. From upright, pull through a $\frac{5}{8}$ loop into a 45° downline, push through a $\frac{3}{4}$ loop into another 45° downline, perform a roll, pull through a $\frac{1}{8}$ loop, exit upright.

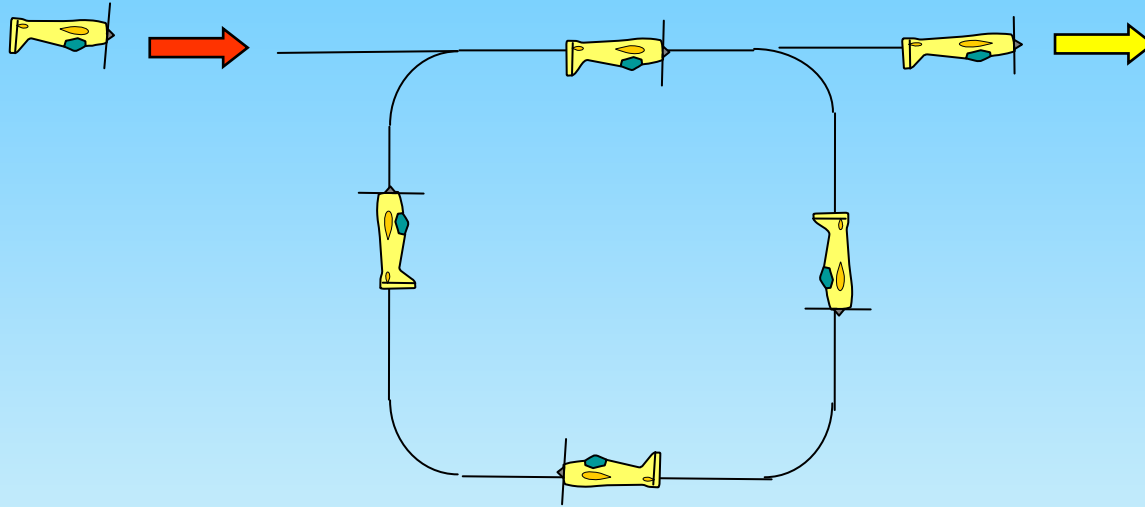


N-13.12: 1/2 Loop



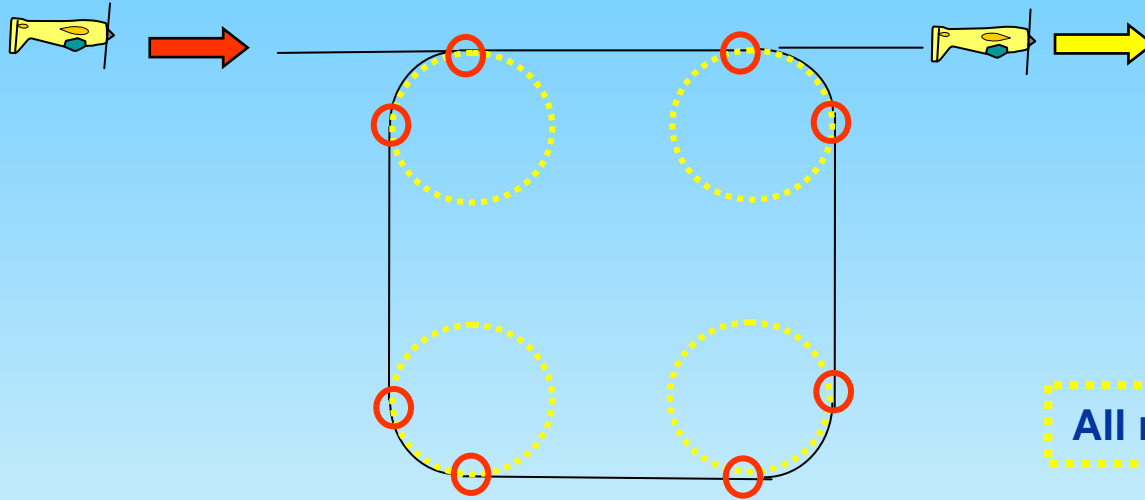


N-13.13: Square Loop. From inverted, pull through a $\frac{1}{4}$ loop into a vertical downline, pull through a $\frac{1}{4}$ loop into a horizontal line, pull through a $\frac{1}{4}$ loop into a vertical upline, pull through a $\frac{1}{4}$ loop into a horizontal line, exit inverted.





N-13.13: Square Loop. From inverted, pull through a $\frac{1}{4}$ loop into a vertical downline, pull through a $\frac{1}{4}$ loop into a horizontal line, pull through a $\frac{1}{4}$ loop into a vertical upline, pull through a $\frac{1}{4}$ loop into a horizontal line, exit inverted.

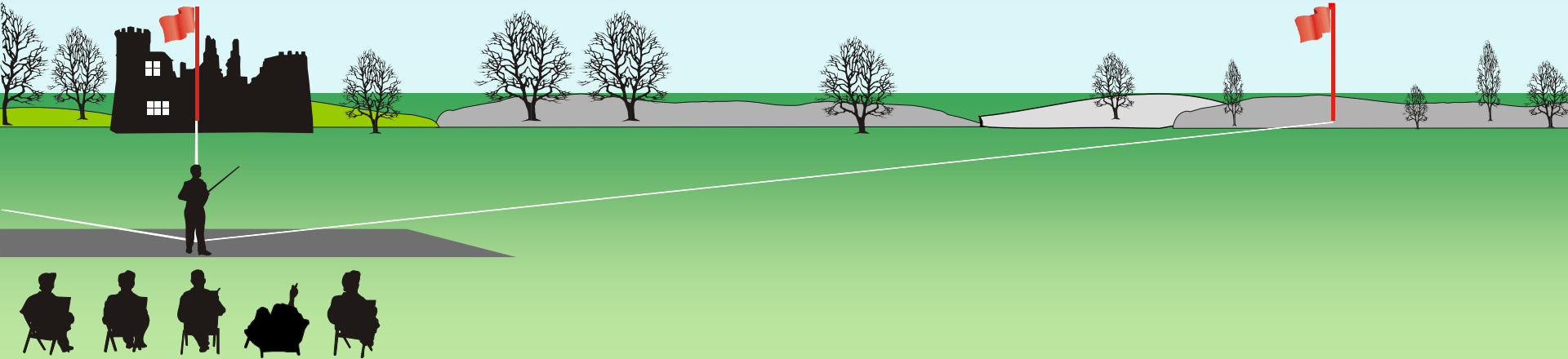
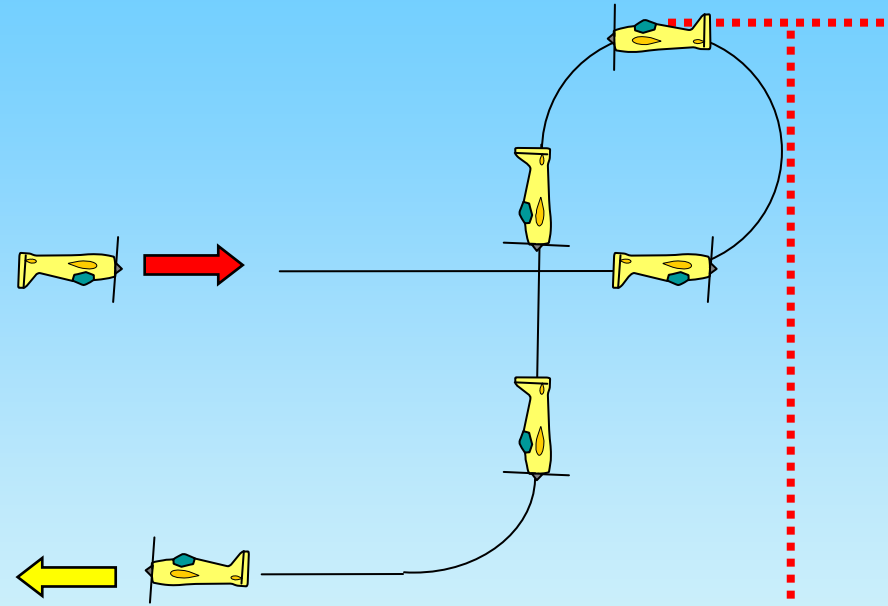


All radii are equal.





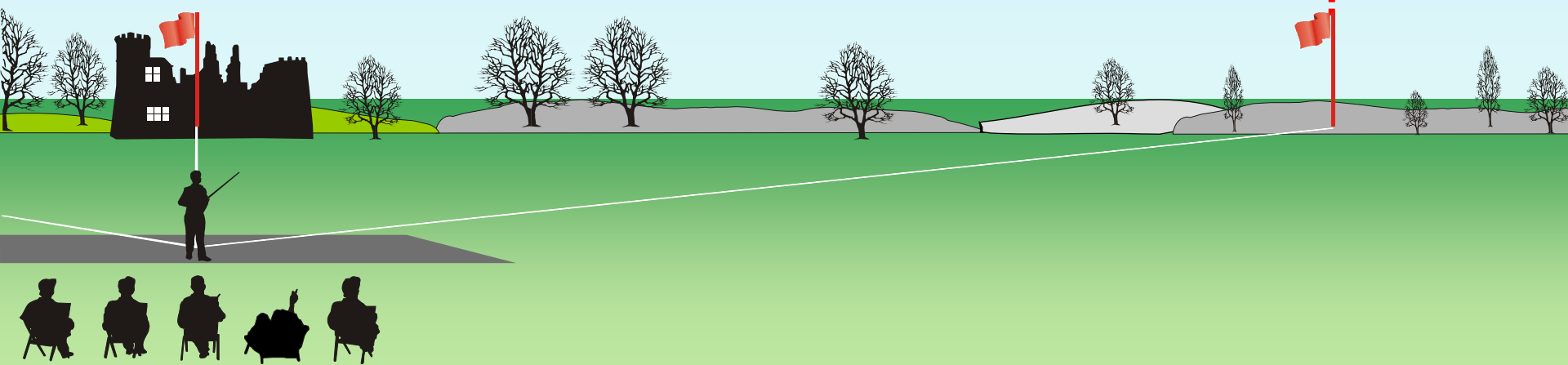
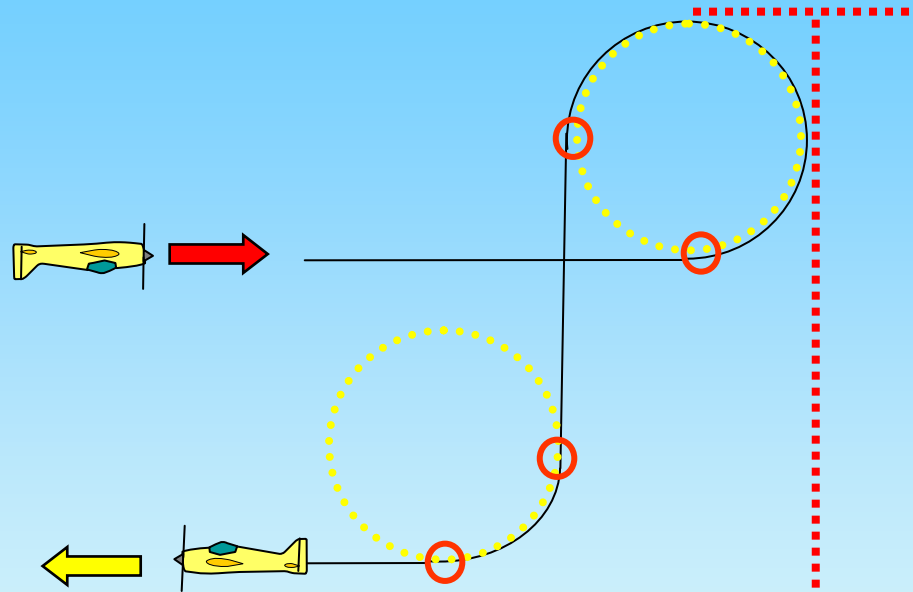
N-13.14: Figure 9, From inverted, push through a $\frac{3}{4}$ loop into a vertical downline, pull through a $\frac{1}{4}$ loop, exit upright.





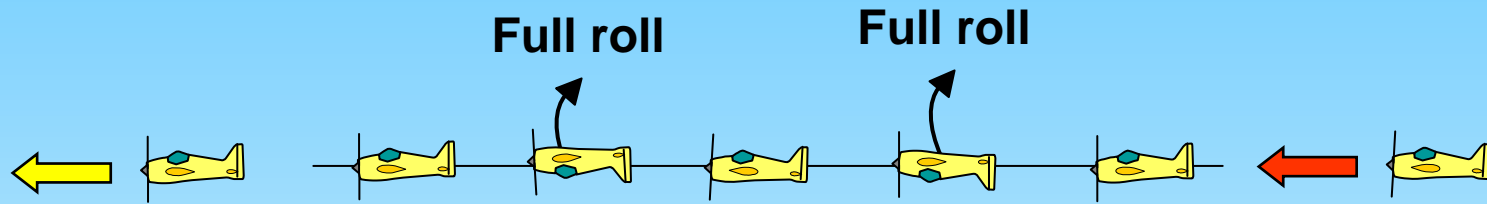
N-13.14: Figure 9, From inverted, push through a $\frac{3}{4}$ loop into a vertical downline, pull through a $\frac{1}{4}$ loop, exit upright.

All radii are equal.



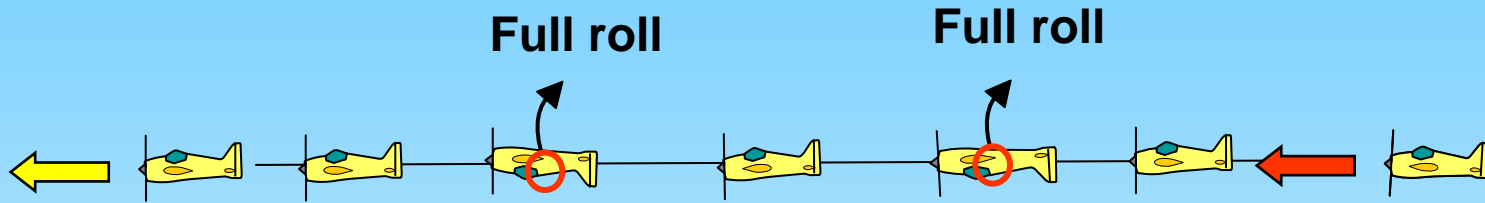


N-13.15: Roll Combination with two consecutive rolls.
From upright, perform consecutively a two rolls in the same direction, exit upright.





N-13.15: Roll Combination with two consecutive rolls.
From upright, perform consecutively a two rolls in the same direction, exit upright.



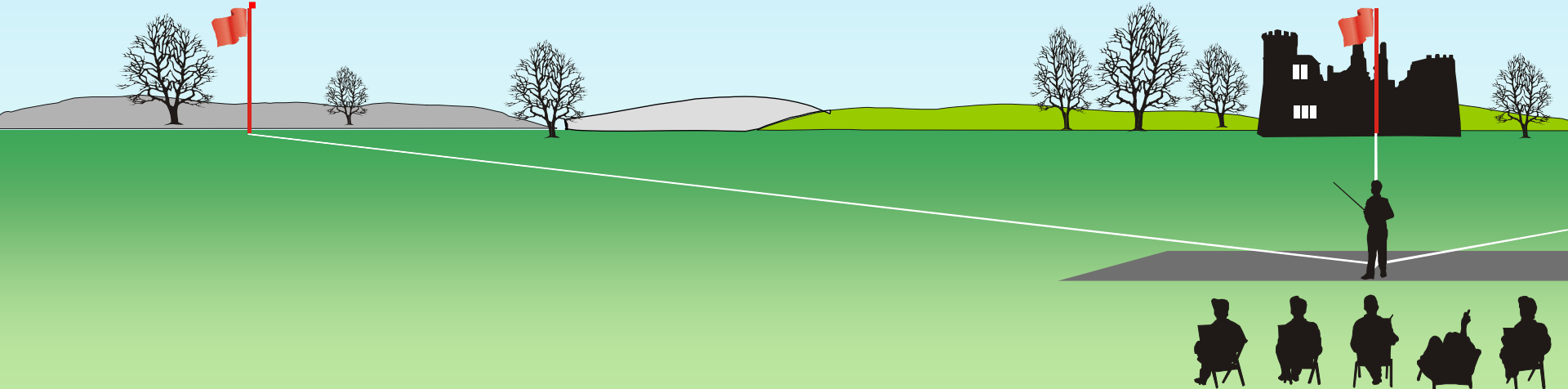
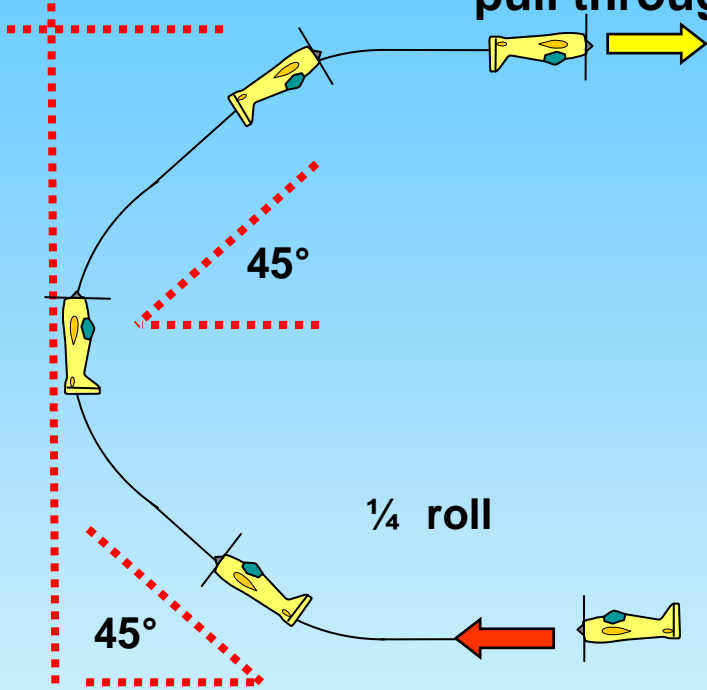
Part rolls must have the same roll rate.

No lines between the rolls.

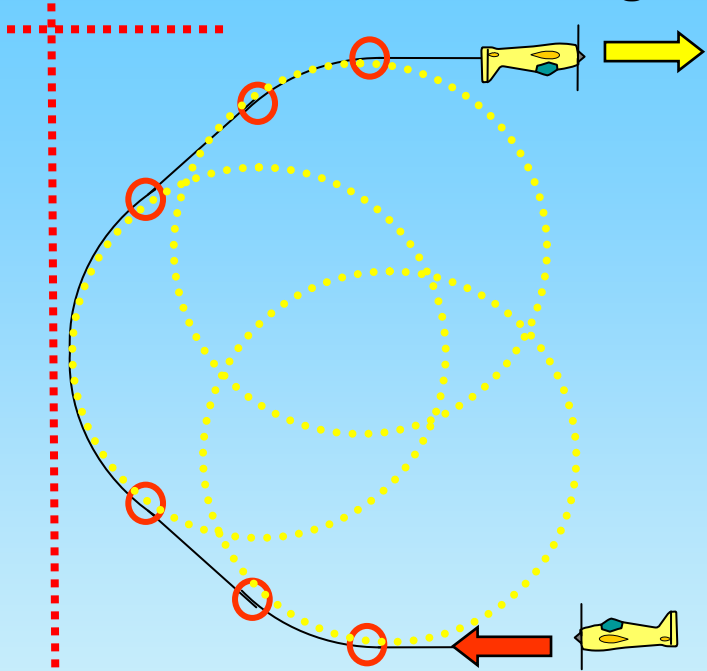




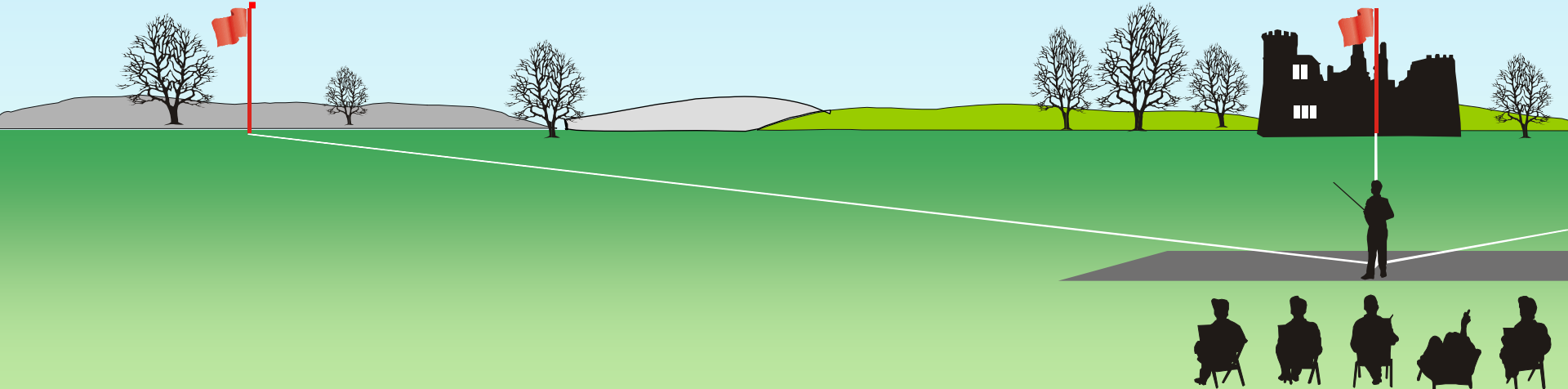
N-13.16: $\frac{1}{2}$ Square Loop on Corner . From upright pull through a $\frac{1}{8}$ loop into a 45° upline, pull through a $\frac{1}{4}$ loop into a 45° upline, pull through a $\frac{1}{8}$ loop, exit inverted.



N-13.16: $\frac{1}{2}$ Square Loop on Corner . From upright pull through a $\frac{1}{8}$ loop into a 45° upline, pull through a $\frac{1}{4}$ loop into a 45° upline, pull through a $\frac{1}{8}$ loop, exit inverted.



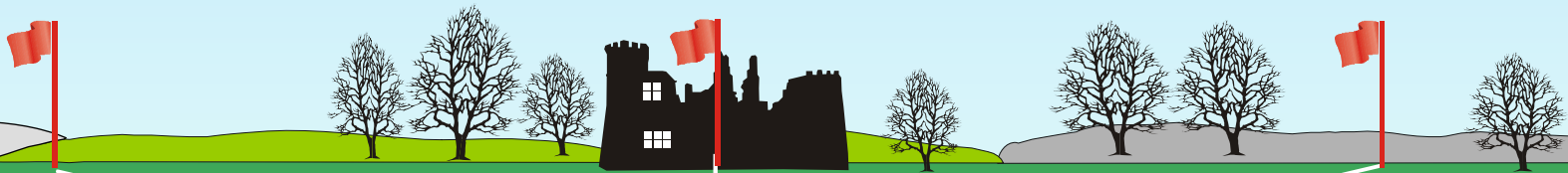
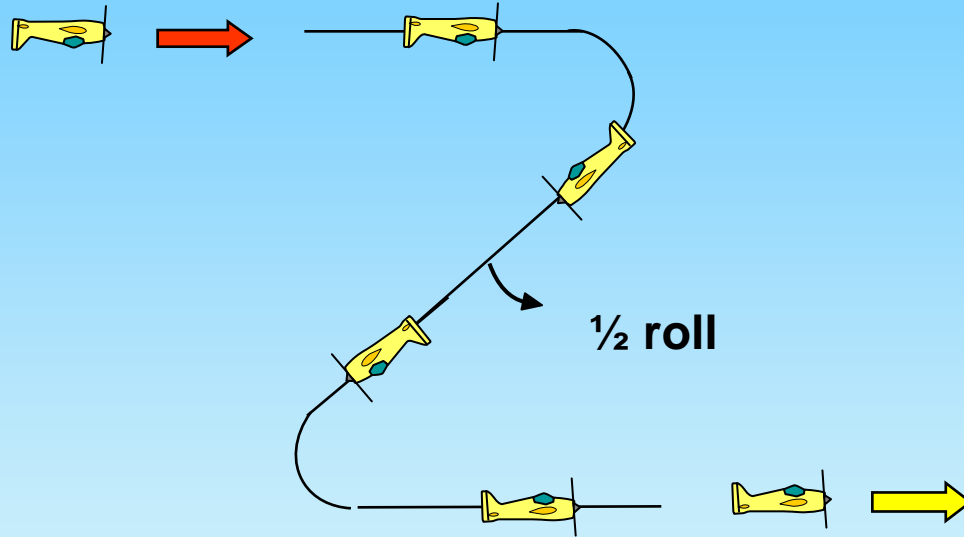
All radii are equal.





N-13.17: Figure Z with $\frac{1}{2}$ roll.

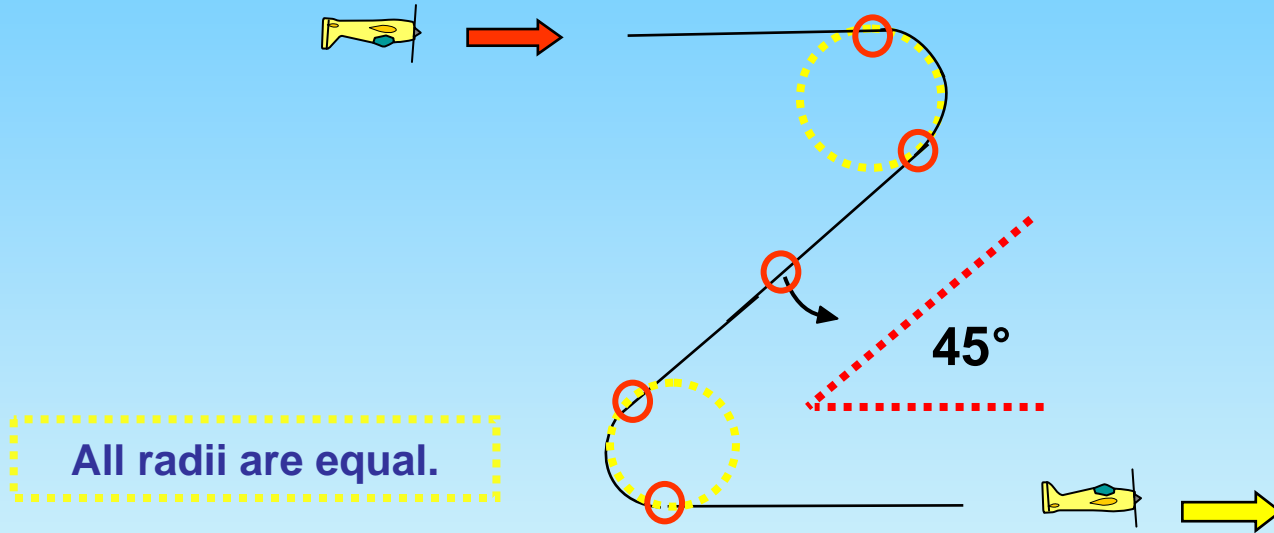
From inverted, pull through a $\frac{3}{8}$ loop into a 45° downline, perform a $\frac{1}{2}$ roll, pull through a $\frac{3}{8}$ loop, exit upright.





N-13.17: Figure Z with $\frac{1}{2}$ roll.

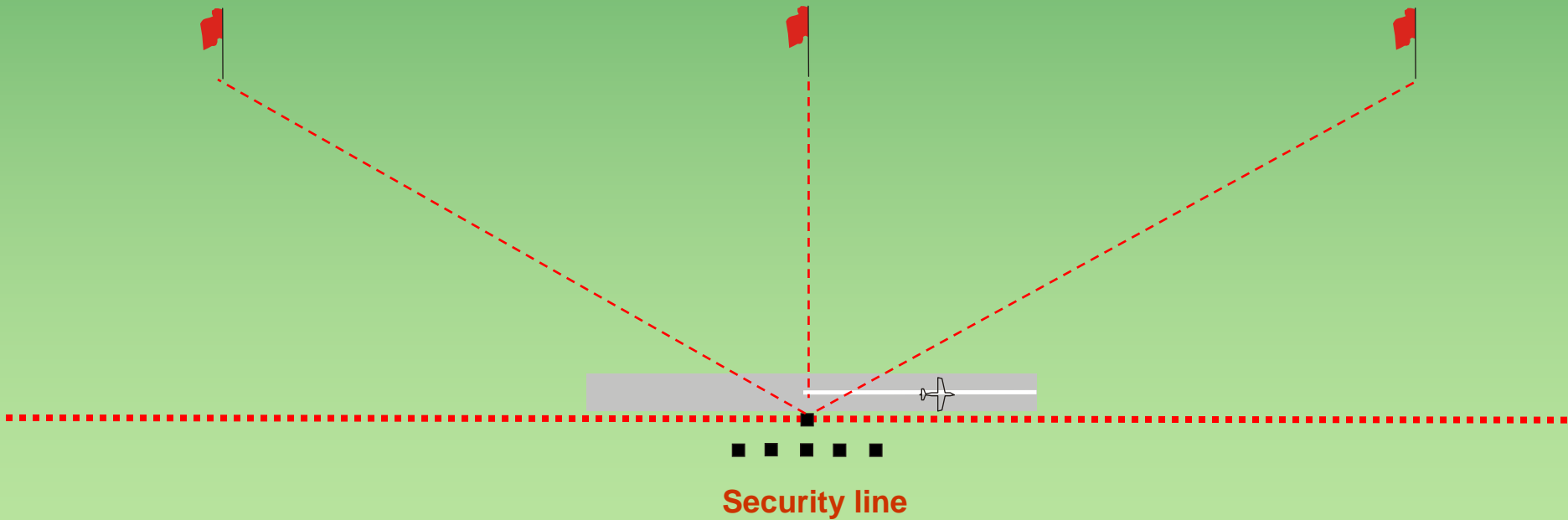
From inverted, pull through a $\frac{3}{8}$ loop into a 45° downline, perform a $\frac{1}{2}$ roll, pull through a $\frac{3}{8}$ loop, exit upright.





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, turbine, rubber-power)

**LOOK ONLY AT LINES DESCRIBED IN THE
SKY!**

(and the precision, smoothness, positioning, and size)

NORDIC N-13



Thank you for your Time!