

Objective:

To complete two 360° turns with proper control technique using 45° of bank while maintaining altitude, coordination, orientation, and division of attention.

1. Clearing Turns	Complete
2. Heading	Cardinal / Section Line
3. Power	Mixture Rich 2300 RPM
4. Airspeed	100 KTS
5. Attitude	Level Turn, 45°- 50° Bank
<u>THROUGH 30° BANK</u>	
6. Attitude	Increase Back Pressure to Maintain Altitude
7. Power	Increase to Maintain Airspeed
8. Coordination	Maintain
<u>ROLLOUT</u>	
9. Attitude	Reduce Bank 10° Before Target Heading Reduce Back Pressure Through 30° Bank
10. Power	Decrease to Maintain Airspeed (2300 RPM)
11. Coordination	Maintain
12. Straight and Level	Establish

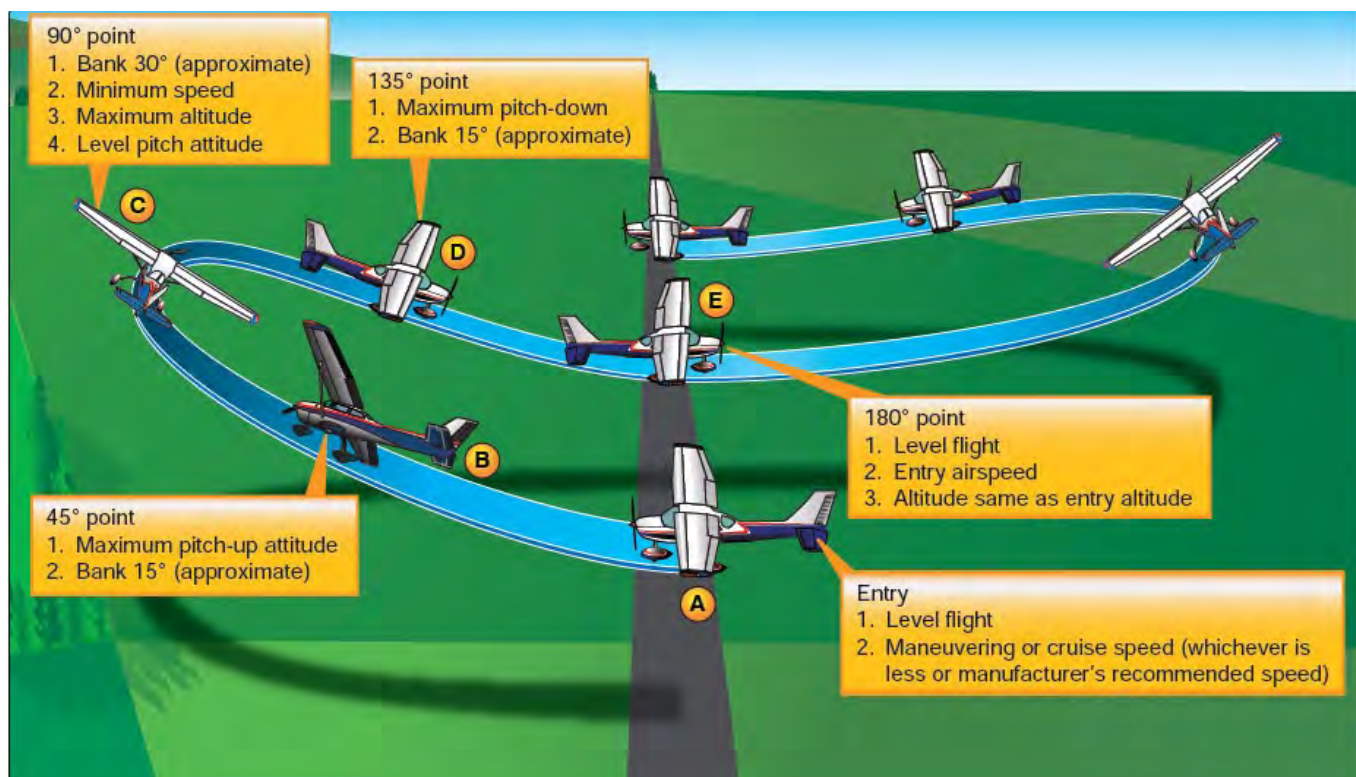


Steep Turns

Objective:

To maintain coordinated flight throughout the maneuver, with constantly changing pitch and bank.

1. Perform two 90° clearing turns
2. 100 KTS (*2300 RPM) maintain altitude
3. Clean configuration flow
4. Choose a reference point off wing
5. Simultaneously increase pitch and bank (SLOWLY)
6. 45° point: 15° pitch up / 15° bank
7. Reduce pitch / increase bank
8. 90° point: level pitch / 30° bank (minimum speed 5-10 KTS above stall)
9. Continue reducing pitch and gradually reducing bank
10. 135° point: 15° pitch down / 15° bank
11. 180° point: level flight at entry airspeed and altitude
12. Repeat in opposite direction
13. Cruise checklist

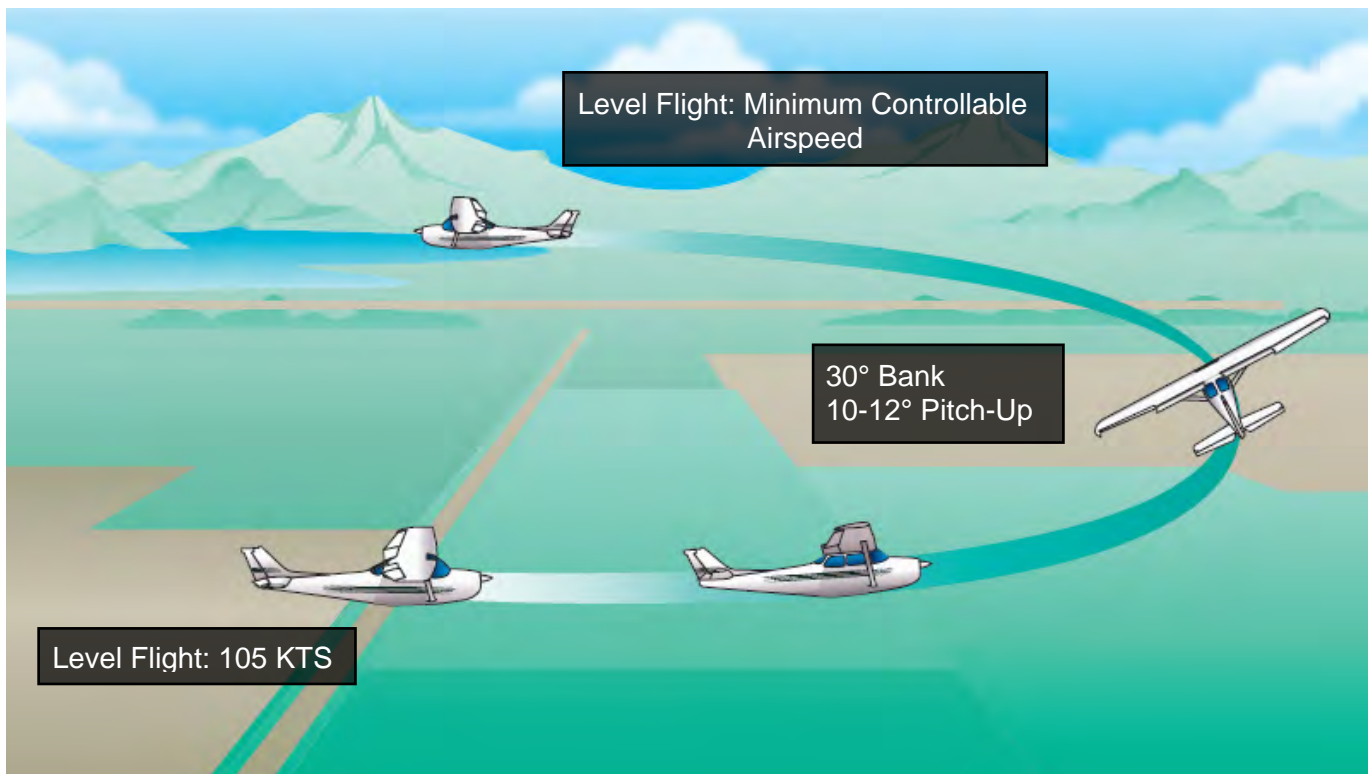


Lazy Eights

Objective:

To complete a maximum performance 180° turn

1. Perform two 90° clearing turns
2. 105 KTS (*2300 RPM) maintain altitude
3. Clean configuration flow
4. Choose a reference point off wing
5. Establish / maintain 30° bank
6. Full Throttle - Gradually increase pitch to attain approx. 10-12° pitch up by the 90° point. First 90° of turn: Bank = constant 30°, Pitch = Gradually increasing to 10-12° pitch up
7. At 90° point: maintain constant pitch while gradually reducing bank angle to attain level flight at 180° point at a speed approaching stall. Second 90° of turn: Pitch = constant 10-12° pitch up, bank gradually decreasing to wings level
8. 180° point: Wings level at minimum controllable airspeed
9. Accelerate while maintaining level off altitude
10. Cruise checklist



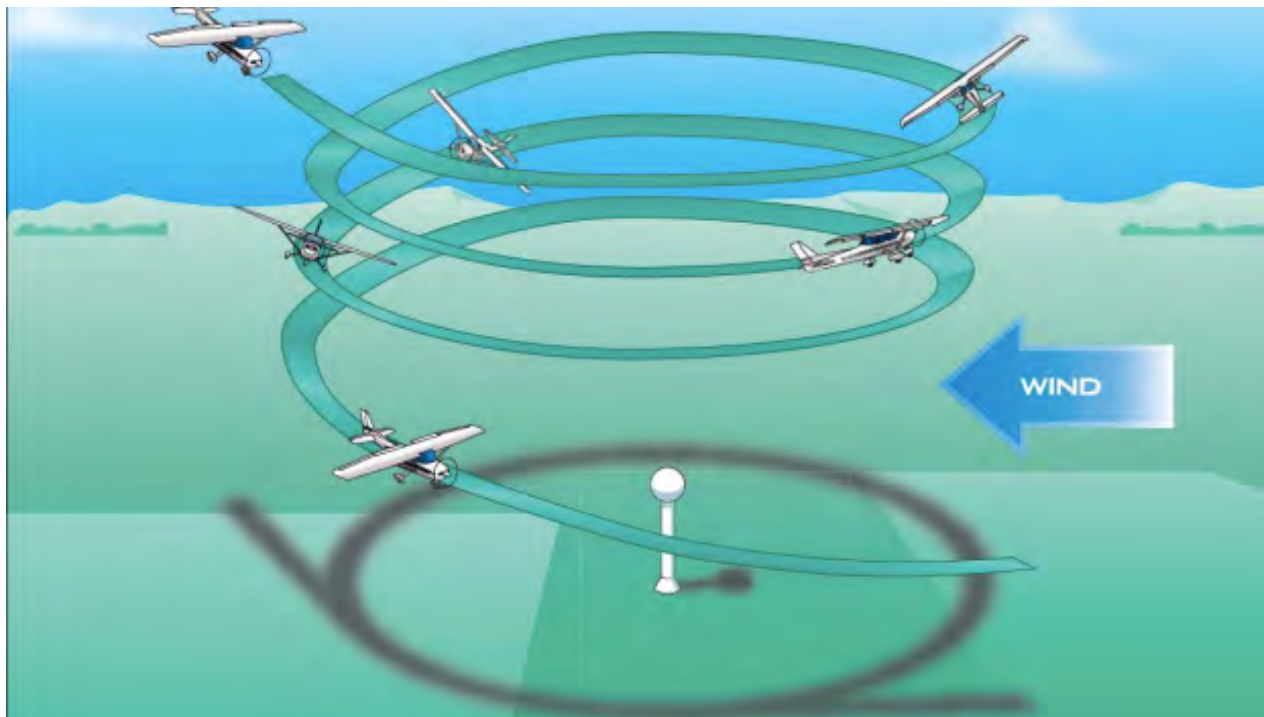
Chandelle

Objective:

To simulate an emergency situation where an aircraft must descend as rapidly as possible to an emergency landing.

1. Altitude - at least 3000' AGL
2. Perform two 90° clearing turns
3. 90 KTS (*1800 RPM) maintain altitude
4. Clean configuration flow
5. Choose appropriate landing site as a visual reference point
6. Reduce throttle to idle
7. Track at least three constant radius circles around reference point
8. Airspeed - constant
9. Bank angle — adjust for winds — not to exceed 60°
10. Clear engine once every 360° turn
11. Recover — roll out on specified heading (visual reference)
12. Adjust DG/HSI to compass
13. Cruise checklist

Note: The DG/HSI will precess during this maneuver. Rely on visual references.



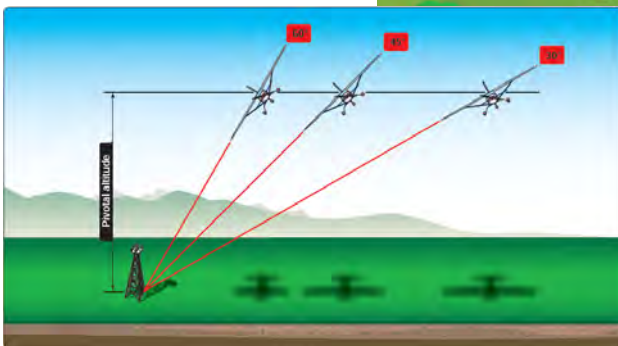
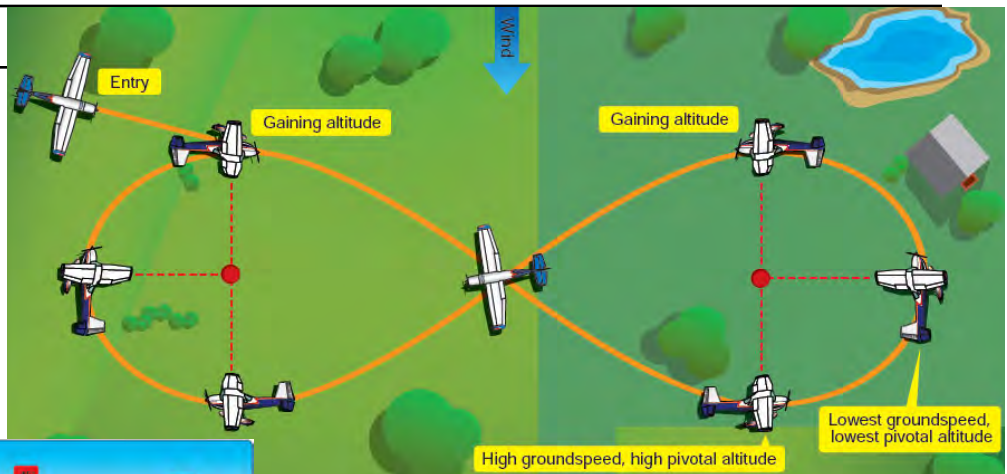
Steep Spirals

Objective:

To fly around each pylon at the pivotal altitude. Pivotal altitude depends on groundspeed. The faster the groundspeed, the higher the pivotal altitude. The altitude will be continuously varied with changes in groundspeed.

1. Determine pivotal altitude (Formula below)
2. Enter pivotal altitude (Approx. 900' AGL at 110 MPH - *2300 RPM)
3. Perform two 90° clearing turns
4. Clean configuration flow
5. Select two pylons to allow for 3 to 5 seconds wings level between the two pylons. Approximately 2/3 to 3/4 mile apart
6. Enter maneuver on a 45° midpoint downwind
7. Apply appropriate pitch corrections to compensate for changes in groundspeed, maintain coordinated flight at all times, and;
8. To maintain line of sight reference with the pylon (pitch forward if point moves toward nose and pitch back if point moves toward tail).
9. Begin roll out to allow the airplane to proceed diagonally between the pylons at a 45° angle.
10. Begin second turn in the opposite direction of the first
11. Exit maneuver on entry heading
12. Cruise checklist

Note: The wing tip should be pointing at the pylons throughout the turns.



$$\frac{\text{Ground Speed}^2}{11.3} = \text{Pivotal ALT Ground}$$

Eights On Pylons