BFR Questions

Name: _____
Pilot Cert#: _____
Date: _____

Airplane Documents	**Airplane Inspections**
A _____ R _____ O _____ W _____	A _____ V _____ I _____ A _____ T _____ E _____
Things Needed for Pilot to be Legal VFR day 1. 2. 3. 4. 5.	**Additional reqt to be current Night VFR Pilot and Aircraft** 1. 2.

Weight and Balance: _____
Landing Distance: _____
TakeOff Distance: _____

5 Exceptions to 3-152 weather minimums

1. _____
2. _____
3. _____
4. _____
5. _____

5 places Mode C is needed.

1. _____
2. _____
3. _____
4. _____
5. _____

Flight Watch Frequency: _____
Flight Service Frequency: _____

TomatoFlames (91.205)
T_____
O_____
M_____
A_____
T_____
O_____
F_____
L_____
A_____
M_____
E_____
S_____

Oxygen (91.211)
>12,500MSL <=14k ft and >30mins: _____ need oxygen
>14kft MSL: _____need oxygen.
>15kft MSL: _____need to be supplied oxygen.

VFR day fuel reserve: _____ min's. (91.151)
VFR night fuel reserve: _____ min's. (91.151)
VFR cruising: >_____kft AGL, Odd or Even + 500ft for 0-179degrees Magnetic Course (91.159)

IMSAFE (ADM)
I_____
M_____
S_____
A_____
F_____
E_____

Left Turning Tendencies
1. _____
2. _____
3. _____
4. _____

Ground effect gives you a _____% reduction in drag.

BFR Questions

Airplane Documents

A Airworthiness Certificate (91.409)
R Registration
O POH (91.9)
W Weight and Balance

Airplane Inspections

A Annual: Every 12 calendar months (91.409)
V VOR every 30 days. (91.171)
I 100hr inspection if for hire (91.409)
A Altimeter (pitot static) every 24 calendar months. (91.411)
T Transponder pitot static) every 24 calendar months. (91.413)
E ELT: Every 12 cal months or ½ battery life (91.207)

Weight and Balance: _____
Landing Distance: _____
TakeOff Distance: _____

Things Needed for Pilot to be Legal VFR day (61.57)

1. Current Medical
2. Valid Pilot Cert
3. Valid govt issued photo ID
4. BFR or equivalent.
5. 3 take offs/lands in last 90 days if passengers are carried.

Additional reqt to be current Night VFR (61.57)

1. 3 takeoffs/lands in last 90days at night (1 hr after sunset, 1hr b4 sunrise to full stop
2. FLAPS (Fuses, Landing Light if for hire, anticol light, pos light, Energy Source)

5 Exceptions to 3-152 weather minimums (91.155)

1. Night Class G, ½ mile from CL, 1mile Clear Clouds
2. Class G Day, SFC to 1200ft AGL, 1mile Clear Clouds
3. Class G Day, 1200ft AGL to 10k MSL, 1m 1000ft above, 500below, 2k horiz
4. >10k MSL, 5m 1000ft above/below and 1mile horiz
5. Class B 3mile Clear Clouds
6. SVFR: 1mile Clear Clouds (This is a special request so not really an exception)

5 places Mode C is needed. (91.215)

1. A, B, C Airspace
2. Above B, C Airspace
3. Mode C Veil
4. >10k ft MSL, unless < 1200ft AGL
5. ADIZ

Flight Watch Fequency: 122.0
Flight Service Frequency: 122.2

TomatoFlames (91.205)
Tach
Oil Pressure Gauge
Manifold Pressure Guage
Airspeed Indicator
Temp Gauge (if liquid cooled)
Oil Temp
Fuel Gauge
Landing Light (Indicator Lights)
Altimeter
Magnetic Compass
ELT
Safety Belts

Oxygen (91.211)
>12,500MSL <=14k ft and >30mins: Pilots and crew need oxygen
>14kft MSL: Pilot and crew need oxygen.
>15kft MSL: All passengers need to be supplied oxygen.

VFR day fuel reserve: 30 min's. (91.151)
VFR night fuel reserve: 45 min's. (91.151)
VFR cruising: >3kft AGL, Odd + 500ft for 0-179degrees Magnetic Course (91.159)

IMSAFE (ADM)
Illness
Meds
Stress
Alcohol
Fatigue
Eats

Left Turning Tendencies
6. PFactor: Descending blade has more bite so provides more thrust.
7. Gyroscopic Procession: Force acts 90deg forward (ex: tailwheel as tail comes up)
8. Spiraling slipstream: Hits vert stabilizer
9. Torque: For every action, there is an opp reaction (prop turning clockwise)

Adverse Yaw: Down aileron raises wing, produces more lift which increases drag.

Ground effect gives you a 50% reduction in drag.

Airspace:
(Part 71) (pg 13-2 FAA-H-8083-25 Pilots Encyclopedia of Aeronautical Knowledge)

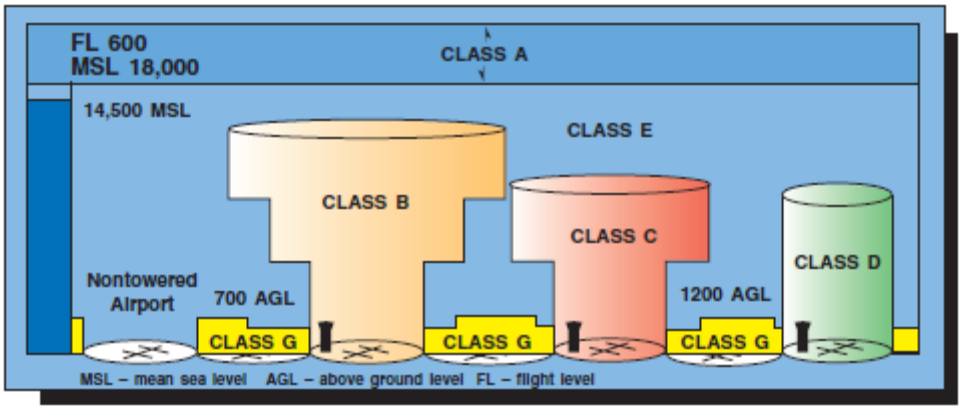


Figure 13-1. Airspace profile.

55. Completion of a flight review: section 61.56(a) and (c).

I certify that (*First name, MI, Last name*), (*pilot certificate*), (*certificate number*), has satisfactorily completed a flight review of section 61.56(a) on (*date*).

/s/ [date] J. J. Jones 987654321CFI Exp. 12-31-05

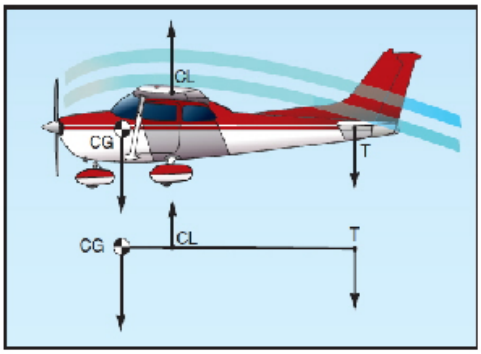
NOTE: No logbook entry reflecting unsatisfactory performance on a flight review is required.

56. Completion of a phase of an FAA-sponsored pilot proficiency award program (WINGS): section 61.56(e).

I certify that (*First name, MI, Last name*), (*pilot certificate*), (*certificate number*), has satisfactorily completed Phase No. ___ of a WINGS program on (*date*).

/s/ [date] J. J. Jones 987654321CFI Exp. 12-31-05

Reference: FAA-H-8083-25



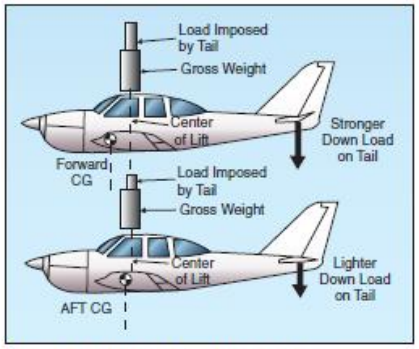


Figure 3-39. Load distribution affects balance.

	Stall Speed	Cruise Speed	Stability
Forward CG	Faster IAS	Slower	More
Aft CG	Slower IAS	Faster	Less

• The CG position influences the lift and angle of attack of the wing, the amount and direction of force on the tail, and the degree of deflection of the stabilizer needed to supply the proper tail force for equilibrium. The latter is very important because of its relationship to elevator control force.

• The airplane will stall at a higher speed with a forward CG location. This is because the stalling angle of attack is reached at a higher speed due to increased wing loading.

• Higher elevator control forces normally exist with a forward CG location due to the increased stabilizer deflection required to balance the airplane.

• The airplane will cruise faster with an aft CG location because of reduced drag. The drag is reduced because a smaller angle of attack and less downward deflection of the stabilizer are required to support the airplane and overcome the nose-down pitching tendency.

• The airplane becomes less stable as the CG is moved rearward. This is because when the CG is moved rearward it causes an increase in the angle of attack. Therefore, the wing contribution to the airplane's stability is now decreased, while the tail contribution is still stabilizing. When the point is reached that the wing and tail contributions balance, then neutral stability exists. Any CG movement further aft will result in an unstable airplane.

• Aforward CG location increases the need for greater back elevator pressure. The elevator may no longer be able to oppose any increase in nose-down pitching. Adequate elevator control is needed to control the airplane throughout the airspeed range down to the stall.

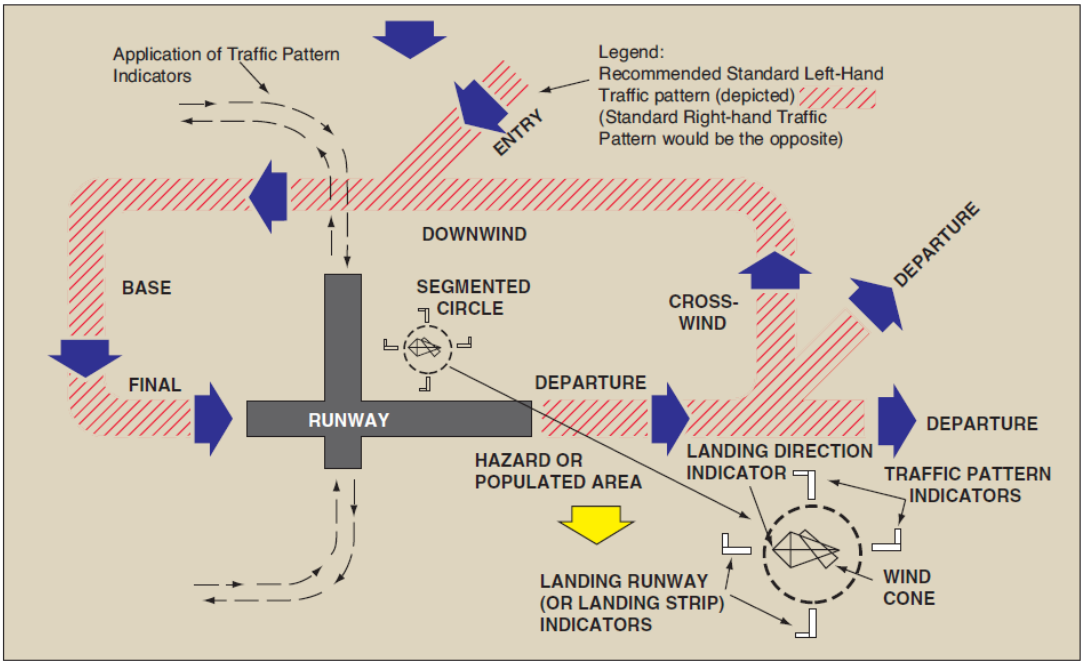


Figure 12-12. Segmented circle and airport traffic pattern.

AIRPORT SIGN SYSTEMS

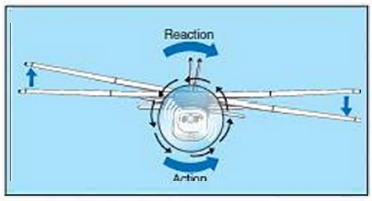
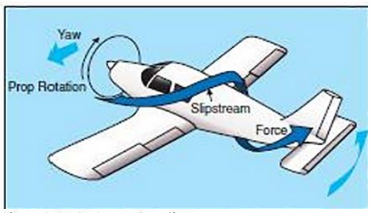
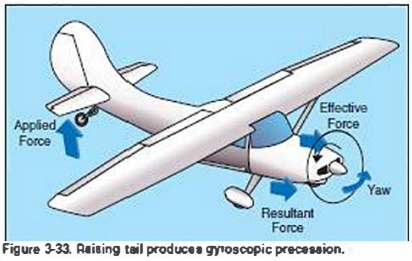
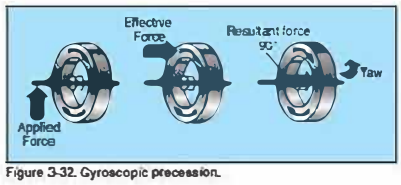
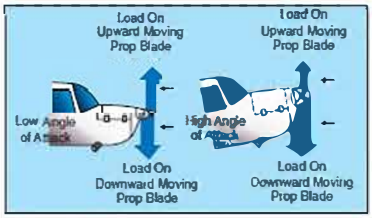
TYPE OF SIGN AND ACTION OR PURPOSE	*TYPE OF SIGN AND ACTION OR PURPOSE*
4-22 — **Taxiway/Runway Hold Position:** Hold short of runway on taxiway	**Runway Safety Area/Obstacle Free Zone Boundary:** Exit boundary of runway protected areas
26-8 — **Runway/Runway Hold Position:** Hold short of intersecting runway	**ILS Critical Area Boundary:** Exit boundary of ILS critical area
8-APCH — **Runway Approach Hold Position:** Hold short of aircraft on approach	J→ — **Taxiway Direction:** Defines direction & designation of intersecting taxiway(s)
ILS — **ILS Critical Area Hold Position:** Hold short of ILS approach critical area	↙L — **Runway Exit:.** Defines direction & designation of exit taxiway from runway
⊖ — **No Entry:** Identifies paved areas where aircraft entry is prohibited	22↑ — **Outbound Destination:** Defines directions to takeoff runways
B — **Taxiway Location:** Identifies taxiway on which aircraft is located	↖MIL — **Inbound Destination:** Defines directions for arriving aircraft
22 — **Runway Location:** Identifies runway on which aircraft is located	**Taxiway Ending Marker** Indicates taxiway does not continue
4 — **Runway Distance Remaining** Provides remaining runway length in 1,000 feet increments	↙A G L→ — **Direction Sign Array:** Identifies location in conjunction with multiple intersecting taxiways

Figure 12-4. Airport signs.

Four Left Turning Tendencies (Torque)

1. Torque Reaction from Engine and Propeller.
2. Corkscrewing Effect of the Slipstream.
3. Gyroscopic Action of the Propeller.
4. Asymmetric Loading of the Propeller (P Factor).

Reference: FAA-H-8083-25

Torque Reaction	**Newton's 3rd Law:** For every action, there is an equal and opposite reaction.	 Figure 3-30. Torque reaction.
Corkscrew Slipstream	Slipstream pushes on the left vertical stabilizer and turns airplane to the left.	 Figure 3-31. Corkscrewing slipstream.
Gyroscopic Precession	 Figure 3-33. Raising tail produces gyroscopic precession.	Applied force is felt 90 degrees in front. Taildragger as the tail lifts, turns to the left.  Figure 3-32. Gyroscopic precession.
P-Factor	Descending prop has more bite, and pulls right side of the airplane around. The effect is that the plane turns to the left.	 Figure 3-34. Asymmetrical loading of propeller (P-factor).