



PRE-SOLO
AERONAUTICAL EXAM

Pre-Solo Knowledge Exam

Student Name: _____

Date: _____ **Aircraft:** _____

About The Exam:

FAR 61.87(b) specifies that before conducting a solo flight, a student pilot must demonstrate satisfactory aeronautical knowledge on a knowledge test that is administered and reviewed by the student's authorized instructor and meets the requirements of the section. The test must address the student pilot's knowledge of applicable sections of FAR Parts 61 and 91, airplane information manual, airspace rules and procedures for the airport where the solo flight will be performed, and flight characteristics and operational limitations for the make and model of aircraft to be flown.

This is an open book test and you will get to keep a copy. Make sure to reference as many answers as you can from official FAA resources, including the Federal Aviation Regulations, Aeronautical Information Manual, Advisory Circulars, Airplane Flying Handbook, Pilot's Handbook of Aeronautical Knowledge, etc.

After you complete this test to the best of your ability, we will review it together and correct it prior to your first solo flight.

General

1. What personal documents and endorsements must you carry for a solo flight as a student pilot? 61.3 (a) (1&2) and 61.51(i)(2)
2. What are your limitations as a student pilot? Are you allowed to carry passengers? Carry persons or property for compensation or hire? 61.87 (o) and (n), 81.89, 91.93 (a) and (b), 61.95
3. Who has the final authority and responsibility for the safety and operation of the aircraft when you are flying solo? 91.3
4. What are your weather minimums? (Personal minimums ex. “I’ll only fly with the clouds at least 3,000 ft off the ground”) Try looking up examples of personal minimums
5. What documents must the aircraft have onboard for each flight? 91.9 and 91.203

6. What information is required as part of preflight preparation for each flight? 91.103

7. What are the requirements for use of seatbelts and safety harnesses? 91.107

8. What is the minimum fuel reserve for day VFR flight? How many gallons would that equal on the aircraft you intend to solo? 91.151

9. What is the minimum amount of fuel YOU would personally feel comfortable taking on a planned 1 1/2 hour solo flight?

11. You are on the downwind while another aircraft is attempting to make a straight-in approach. Which aircraft has the right of way? How would you handle the situation? What are your options? 91.113

12. What is the fastest way to avoid another aircraft that will imminently converge with you at the same altitude? 91.113

13. Discuss right-of-way rules when overtaking an aircraft, approaching head-on, and when two aircraft are converging from the side. 91.113

14. Except when necessary for takeoff or landing, what are the minimum safe altitudes when flying over congested and other than congested areas? 91.119

15. If the altimeter setting is not available at an airport, what setting should you use before departing on a local flight? 91.121

16. When practicing steep turns, stalls, and maneuvering during slow flight, the entry altitude must allow recovery to be completed no less than how many feet AGL?

17. Can a student pilot request special VFR in less than VFR conditions? Explain your answer. 91.157

18. Provide visibility and cloud clearance requirements for the following airspace.

Class C- _____

Class E below 10,000' MSL- _____

Class G below 1,200' AGL during the day- _____

Class G below 1,200' AGL at night- _____

19. During run-up, you cause rocks, debris, and propeller blast to be directed toward another aircraft or person. Can this be considered careless or reckless operation of an aircraft? Why or why not? 91.13

20. What altitudes should you use when operating VFR in level cruising flight at more than 3000 feet AGL and what determines those altitudes? 91.159

21. What is the emergency frequency?

21. What is the IMSAFE checklist? How should you use it?

22. What is the PAVE checklist? How should you use it?

23. For a student pilot, what are the restrictions to flight above the clouds? 61.89(a)(7)

24. List the minimum equipment and instruments that must be working properly in your aircraft for the day VFR flight. 91.205 (acronym online for 91.205)

End of Section

Aircraft

1. Fill in the V-speed definitions and the corresponding speed for your training airplane. Definition Speed (Glass Cockpit Website-- Aircraft--POH)

V_{so}

V_s

V_x

V_y

V_{fe}

V_a

V_{no}

V_{ne}

2. What is the best glide speed for your training airplane? KIAS

3. Describe the changes in V_a with changes in the gross weight of an aircraft.

4. Describe any limitations on flap use in your training airplane.

5. Under what circumstances should you use carburetor heat (If applicable)?

6. Under what circumstances would a spin occur in your training aircraft?

7. Describe the spin recovery procedures for your training aircraft.

8. What is the stall speed of your airplane in a 60-degree bank?
(Research load factor)

End of Section

Airport and Airspace

1. In what airspace is the Boise Airport? How far out from the airport does it extend, and at what altitudes?
2. What is the traffic pattern altitude in MSL at the Boise airport?
3. What is required to enter the airspace surrounding the Boise airport? List operational and equipment requirements.
4. What are the VFR weather minimums for the area surrounding the Boise airport?
5. In what airspace is the Nampa airport at the surface? In what airspace is its traffic pattern?
6. What are the VFR weather minimums for the Nampa airport's airspace?

7. What frequencies would you need for a flight to the Nampa airport?

8. You are going to the Nampa airport for landing practice and will return back to Boise. When should you make radio calls to Nampa?

9. How can you tell if a runway is closed?

10. If you receive ATC instructions that you do not understand or feel may compromise safety, what should you do?

11. Describe lost comms procedures at the Boise Airport AND Nampa airport.

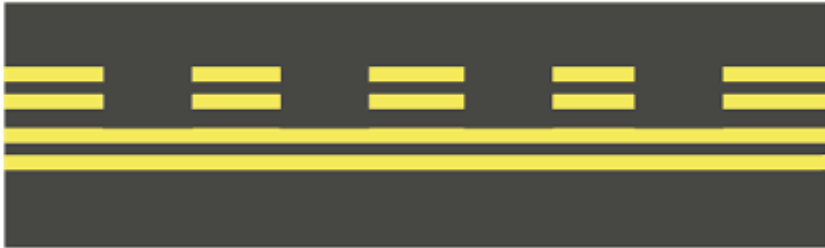
12. You call Approach prior to entering Boise and the controller tells you “N12345, Standby.” Are you now allowed to enter the airspace without any further instructions? Explain.

13. What is the standard direction of turn in the traffic pattern? How would you know if an airport had a non-standard pattern?

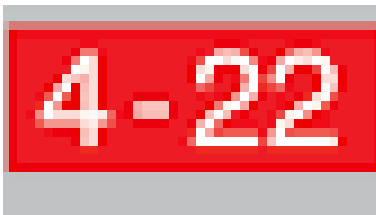
14. What is the meaning of each of the following ATC light signals?

In Flight	Signal	On the Ground
	Steady Green	
	Flashing Green	
	Steady Red	
	Flashing Red	
	White	
	Alternating Red/Green	

Define the following Airport Signs:









Acknowledgement:

This test has been reviewed with the student and corrected to completion. This test satisfies FAR 61.87(b).

CFI Name: _____ Certificate Number: _____ Exp. _____

CFI Signature: _____ Date: _____

Student Name: _____ Cert. No. _____

Student Signature: _____ Date: _____