



## Pre-Solo Written Exam (ASEL)

Student Name: \_\_\_\_\_

### Introduction

FAR 61.87(b) specifies that prior to conducting 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, Piper Cherokee or Warrior information manual (located on kpsair.com under flight school), 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.

Student pilots should understand that the pre-solo written exam is a separate exam and is different from and in addition to the FAA Recreational or Private Pilot knowledge tests.

### Exam Procedures and Instructions

This pre-solo written exam will be given to a Student Pilot in anticipation of solo flight. This is an "open book" exam. Answers to most questions can be found in the current FAR/AIM or the Pilot's Operating Handbook/Owners Manual for the aircraft to be flown. Each of the questions in this exam requires the Student Pilot to supply an answer rather than choose the correct answer as in most FAA tests. Consequently, some research and "digging" will be necessary. After the Student Pilot completes the exam, it will be reviewed with the student's instructor. Any incorrect answers will be discussed and corrected.

All questions address important areas that are critical to safe, legal and enjoyable flying. It is most important that the information be known and understood.

Aircraft make and model to be solo'd in: \_\_\_\_\_

Date of exam critique: \_\_\_\_\_

Corrected to 100%: \_\_\_\_\_

Instructor Signature: \_\_\_\_\_

## Sections A Systems

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What are the primary flight controls on an aircraft?

What are the secondary?

Name the Instrument.



1. What type of engine does this aircraft have?

2. How many fuel pumps are there? What are they powered by?

3. Name all the components of the Electrical System.

4. What instruments are powered by the Pitot/Static System?
5. What instruments are powered by only the Static System?
6. What instruments are powered by the Vacuum System?
7. What instruments are powered by the Electrical System?
8. What powers the vacuum pump?
9. How much total fuel can the plane hold? How much is it usable?

Name the V-Speeds and what they stand for.

$V_X$

$V_Y$

$V_G$

$V_A$

$V_{FE}$

$V_{NO}$

$V_{NE}$

$V_{SO}$

$V_{S1}$

## Sections B Airspace

(Can use either Foreflight or Skyvector.com for reference)

What airspace is PNS in?

What airspace is MSY in?

What airspace is OR1 in?

What airspace is JKA in?

What airspace is CEW in?

List out the cloud clearance requirements when operating in Class B,C,D,E, and G.

List the Equipment required in each airspace.

Class B

Class C

Class D

Class E & G

## Sections C Aerodynamics

1. What are the four forces of flight?
2. What are the 2 types of drag
3. What is a stall?
4. What are the 4 Left turning Tendencies?
5. What is adverse yaw?
6. What is a spin? How do you recover from a spin?

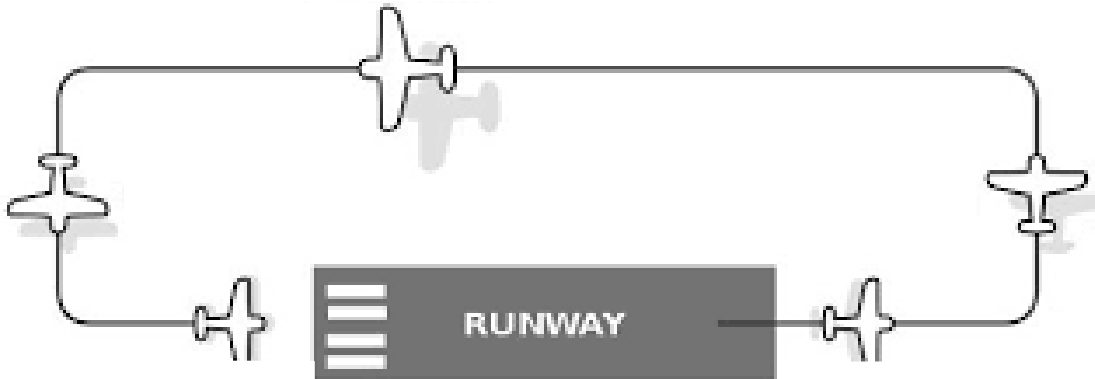
## Sections D Regulations

1. What documents do you need as a Private Pilot?
2. What must you perform before every flight to check that you are fit to fly?
3. What documents does the aircraft need to fly?
4. What is the required equipment for an aircraft during the Day? Night?
5. What are the required inspections for an aircraft?
6. What is currency and how do you maintain it?
7. What is the difference between currency and proficiency?
8. What type and when does your Medical expire?
9. No pilot may consume alcohol within \_\_\_\_\_ hours or have a blood alcohol content of \_\_\_\_\_

## Sections E The Pattern

1. What is the standard direction in the traffic pattern
2. What is the standard Pattern altitude for a Piston aircraft? What about Jet traffic?

3. Name the parts of the pattern.



4. Can you expect a short approach on your solo?

5. What do you do if given "low approach" by ATC

6. You are given these instructions by ATC while doing pattern work for RWY 17. "N123AB, When you are South of runway 26, make right 360s and keep them South of runway 26" What will you do?

7. What is LAHSO? If ATC instructs you to do it, can you during your solo?

## Sections F Scenarios

1. If water is present in a fuel sample, where will it go?

2. Before executing any maneuvers in the practice area, what should you do?

3. You are on short final approach and another aircraft taxis onto the runway, what should you do?
  
4. What is the minimum legal safe altitude while flying over a congested area (except during takeoff and landing)
  
5. If a large aircraft lands just ahead of you, how will you avoid its wake turbulence during your landing?
  
6. How do you perform a crosswind Takeoff and Landing?