Stage III Private Pilot
Ground Lesson 11
Chapter 8, Airplane Performance

Leading Edge Aviation
Version 2015
Student Name _____

Lesson Objective:

- Learn how to use data supplied by the manufacturer to predict airplane performance, including takeoff and landing distances and fuel requirements.
- Learn to compute and control the weight and balance condition of a typical training airplane.
- Become familiar with basic functions of aviation computers.
- Understand the effects of density altitude on takeoff and climb performance.

Academic Content:

Section A - Predicting Performance
☐ Aircraft Performance and Design
☐ Chart Presentations
☐ Factors Affecting Performance
☐ Takeoff and Landing Performance
☐ Climb Performance
☐ Cruise Performance
☐ Using Performance Charts

Date Completed_____   Time _____

Section B - Weight and Balance
☐ Importance of Weight
☐ Importance of Balance
☐ Terminology
☐ Principles of Weight and Balance
☐ Computation Method
☐ Weight and Balance Methods – Computation, Table, and Graph
☐ Weight Shift Formula
☐ Effects of Operating at High Total Weights
☐ Flight at Various CG Positions

Date Completed_____   Time _____

Section C - Flight Computers
☐ Mechanical Flight Computers
☐ Time, Speed, and Distance
☐ Airspeed and Density Altitude Computations
☐ Wind Problems
☐ Conversions
☐ Multi-Part Problems

Date Completed_____   Time _____

Completion Standards:
☐ Calculate airplane performance and weight and balance using performance charts and a flight computer and discuss the results with the instructor.
☐ Complete with a minimum score of 80%: questions for Chapters 8 Sections A, B, and C. Review with the instructor each incorrect response to ensure complete understanding before starting Ground Lesson 12.

I certify that the aforementioned training has been conducted and/or received in accordance with Leading Edge Aviation Standards and the current 141 approved Jeppesen Private Plot Syllabus.

Instructor_____   Date_____

Student_____   Date_____