

AVIA 101 Homework Assignment # 7
 Answers are located in your Jeppesen Private Pilot Manual

Chapter 8 Airplane Performance

1. Describe how density altitude affects aircraft takeoff and climb performance.

2. Refer to the density altitude chart on page 8-8 of your text. What is the density altitude for a field elevation of 1,165 MSL, a temperature of 70°F, and an altimeter setting of 30.10" Hg?

3. Refer to the density altitude chart again and solve the following. What is the density altitude for a field elevation of 5,250' MSL, temperature of 81°F, and an altimeter setting of 29.95" Hg?

4. Using the takeoff distance table on page 8-6 of your text, determine the total distance necessary to clear a 50-foot obstacle? _____

Weight	2,400 lbs
Pressure altitude	4,000 feet
Temperature	20°C
Headwind	18 knots (decrease distances 10% for each 9 knots HW)

5. Refer to the graph on page 8-14. Determine the total distance required to land. _____

OAT	Std
Pressure altitude	10,000 feet
Weight	2,400 lbs
Wind component	Calm
Obstacle	50ft

6. Use the table on page 8-16 to determine maximum rate-of-climb. _____

Weight	2,400 lbs
Pressure altitude	3,000 feet
Temperature	50°F
Indicated airspeed (KIAS)	75 KIAS

7. Define:

- Range –
- Endurance –
- Center of Gravity –
- Basic Empty Weight –