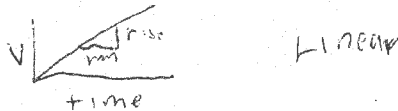


PHYSICS OF FLIGHT FINAL REVIEW

1. Define or describe acceleration.

Acceleration is the rate at which something increases in all directions.

2. If you plotted velocity vs time, the slope of the line would be what?.



3. What is the equation for distance?

$$d = vt$$

4. What are some of the factors that affect Lift (recall the Lift equation)?

$$L = \frac{1}{2} \rho v^2 C_L A$$

5. If it takes you 4 hours to travel 60 miles, what is your speed.

$$\frac{60}{4} = 15 \text{ mph.}$$

6. If you accelerate from 0 mph to 60 mph in 10 s, what is your acceleration?

$$A = \frac{60 - 0}{10 - 0} = \frac{60}{10} = \boxed{6 \text{ mph/s}}$$

7. Convert 120mph to feet/sec

$$\frac{120 \text{ mph}}{1 \text{ hour}} \rightarrow ? \text{ ft/sec} \quad \frac{120}{1} \cdot \frac{5280}{1} = \frac{633,600}{3600} = \boxed{176 \text{ ft/sec}}$$

8. What are the factors that affect takeoff distance?

The Factors are:

Weight C_L ρ = density of air = temp/pressure
Flaps

9. What did you like about this class?

I liked being able to use
xplane and learn with friends.

10. What should be improved for next time?

I think you can improve next time.