

CHAPTER REVIEW

Chapter **23**

Physics of Flight

I. Vocabulary Review

If the underscored word or phrase makes the sentence true, write "TRUE" in the space provided. If the underscored word or phrase makes the sentence false, write the correct term or phrase in the space provided.

- _____ 1. The speed reached by a falling object when the force of air resistance is equal and in the opposite direction as the force of gravity is stall speed.
- _____ 2. Weight is the force that gravity exerts on objects.
- _____ 3. The product of mass and velocity is acceleration.
- _____ 4. The force that acts in an opposite direction from thrust is lift.
- _____ 5. A force is needed when an object undergoes acceleration.
- _____ 6. The relationship between force, mass, and acceleration is the Bernoulli effect.

II. Concept Review

Answer the following in phrases or complete sentences.

- 7. Under what conditions will an airplane maintain a constant speed? _____

- 8. What happens when lift is greater than the weight of an airplane? _____

- 9. How can a small airplane have the same momentum as a larger airplane? _____

- 10. What are the contact forces that interact with an airplane? _____

- 11. Explain what happens to an airplane as it goes into a free-fall dive. _____

Chapter Review 23 (continued)

Use Figure 1 to answer the following questions.

12. Which arrow represents the force of lift? _____
13. Which arrow represents the force of weight? _____
14. Which arrow represents air resistance? _____
15. Which arrow represents the thrust of the engine?

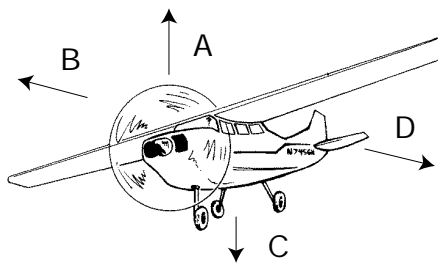


Figure 1

III. Skill/Process Review

Using the data in the following table for airplanes A, B, and C, answer the following questions in the spaces provided.

16. Which airplane has the greatest overall acceleration? _____
17. Which airplane has the least overall acceleration? _____
18. What is the acceleration of airplane A? _____
19. What can you assume about airplane B? _____

Time (s)	Airplane A Speed (m/s)	Airplane B Speed (m/s)	Airplane C Speed (m/s)
0	0	66	0
1	11	66	15
2	22	66	30
3	33	66	45
4	44	66	60
5	55	66	75
6	66	66	90
7	77	66	105
10	110	66	150

IV. Feature Review

20. **Science and Society: Diseases: Frequent Flyers?** Give an advantage and a disadvantage of media reports about the spread of disease. _____

