

CHAPTER REVIEW

Forces and Machines

I. Vocabulary Review

Match each item in Column I with the most appropriate item in Column II. Write the letter for that item in the blank at the left.

- | Column I | Column II |
|---|-------------------------------|
| _____ 1. force opposing motion between two surfaces that are touching | a. efficiency |
| _____ 2. Newton's Third Law of Motion | b. friction |
| _____ 3. tendency for an object to resist a change in its motion | c. inertia |
| _____ 4. measures the amount of matter in an object | d. law of action and reaction |
| _____ 5. expressed as a ratio of work output to work input | e. mass |
| _____ 6. affects an object's weight distribution | f. work |
| _____ 7. rate at which work is done | g. simple machines |
| _____ 8. force \times distance | h. ideal mechanical advantage |
| _____ 9. number of times the effort force is multiplied | i. power |
| _____ 10. can be classified into two families | j. center of gravity |

II. Concept Review

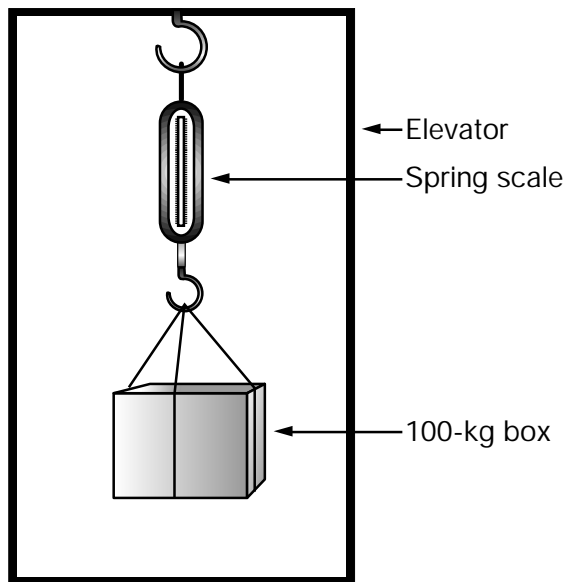
In the blank, write the word or phrase that best completes the sentence.

11. A simple machine makes work easier by either _____ or _____.
12. _____ measures the force of gravity between Earth and an object located on Earth.
13. The double pulley is a _____ machine.

Chapter Review 17 (continued)

Use the figure to answer the following questions.

14. If the elevator accelerates upward, the spring scale would indicate a _____ force as the box pulls downward.
15. If the elevator suddenly stops on its way upward, the spring scale would indicate a _____ force as inertia keeps the box moving upward.
16. If the elevator accelerates downward, the spring scale would indicate a _____ force as the box pushes upward.



III. Skills/Process Review

Answer the following questions in phrases or complete sentences.

17. Why is a person with leather-soled shoes less likely to slip on a carpeted floor than on a smooth polished floor? _____

18. How does the work of lifting a 200-N box a vertical distance of 2.0 m compare with lifting a 50.0-N box 8.0 m? _____

19. Two people of the same mass climb the same rope to the ceiling of a gymnasium. The first person climbs the rope in 20 s, the second person takes 25 s. Compare the power of each person.

IV. Feature Review

20. **Science and Society: Equal Access** Describe the journey of a person using a wheelchair from your residence to a shopping mall where you normally shop. _____

