

Name: _____

Class _____

Date _____

17.2 Directed Reading

Section: What Is a Force?

For questions 1-3 fill in each blank with the word below that best completes the sentence.

- a. Motion b. force c. Newton d. quantify

- ____ 1. A push or a pull is a _____.
- ____ 2. Any change in _____ is caused by a force.
- ____ 3. The SI unit for force is called a _____.

FORCES ACTING ON OBJECTS

- ____ 4. What does a person sitting on a chair exert on a chair?
a. speed b. a force c. direction d. no force
- ____ 5. What does a bulldozer exert on a pile of soil?
a. motion b. no force c. force d. velocity

DETERMINING NET FORCE

- ____ 6. What is the combination of all forces acting on an object called?
a. energy b. net force c. motion d. heat

Forces in the Same Direction

- ____ 7. How do you find the net force when the two forces act in the same direction?
a. dividing b. multiplying c. subtracting d. adding

Forces in Different Directions

- ____ 8. How do you find the net force when the forces act in opposite directions?
a. dividing b. multiplying c. subtracting d. adding
- ____ 9. How would you find the net force of two dogs pulling in opposite directions?
a. subtract the smaller force from the larger force c. add the two forces
b. subtract the larger force from the smaller force d. multiply the forces

BALANCED AND UNBALANCED FORCES

- ____ 10. What is a combined force that does not cause movement?
a. a Newton b. a net force c. an unbalanced force d. a balanced force
- ____ 11. When forces are balanced, the net force equals how many newtons?
a. 0 b. 1 c. 2 d. 3

Unbalanced Forces

- ____ 12. To make something move, what kind of force(s) do you need?
a. a balanced force c. any combination of forces
b. an unbalanced force d. no combination of forces
- ____ 13. What kind of force causes something to change direction?
a. a balanced force c. any combination of forces
b. an unbalanced force d. no combination of forces

BALANCED AND UNBALANCED FORCES IN ACTION

For questions 14-17 fill in each blank with the word below that best completes the sentence.

- a. Balanced b. unbalanced c. lift d. open

14. Keeping a book _____ requires balanced forces.
15. A swimmer stays afloat because of _____ forces.
16. The shape of an airplane's wings helps create _____.
17. Heart muscles exert _____ forces to keep the heart beating.

Assessment

Section Quiz

Section: What Is a Force? 17.2

Match the correct description with the correct term. Write the letter in the space provided.

- | | |
|---|--------------|
| _____ 1. a push or a pull exerted on an object in order to change the object's position | a. newton |
| _____ 2. the SI unit for force | b. force |
| _____ 3. the combination of all forces acting on an object | c. net force |

Write the letter of the correct answer in the space provided.

- _____ 4. Which of the following choices best represents force?
- a push or a pull always causing motion
 - a push or a pull always causing acceleration
 - a push or a pull acting without an object
 - a push or a pull acting on an object
- _____ 5. Which of the following best determines the net force when more than one force is acting on an object?
- a combination of all motions of an object
 - a combination of all motions of an object in two directions
 - a combination of all forces acting on an object
 - a combination of forces acting on an object in two directions
- _____ 6. When the net forces equal 0 N, they are which of the following?
- | | |
|---------------|-----------|
| a. balanced | c. a push |
| b. unbalanced | d. a pull |
- _____ 7. Which of the following always causes change in speed, direction, or both?
- balanced forces
 - unbalanced forces
 - either balanced or unbalanced forces
 - any combination of forces
- _____ 8. Which of the following causes an object to start moving?
- balanced forces
 - unbalanced forces
 - either balanced or unbalanced forces
 - any combination of forces