

**Newton's Laws Review 2****Multiple Choice**

*Identify the choice that best completes the statement or answers the question.*

## 5.1 Conceptual Questions

- \_\_\_\_\_ 1) In a collision between a huge SUV and a small hybrid car, the SUV exerts a larger force on the hybrid than the hybrid exerts on the SUV.  
A) True B) False C) It depends on whether the collision is a head-on collision or a rear-end collision.
- \_\_\_\_\_ 2) A box is placed on a table which rests on the floor. The box pushes on the table; the reaction force to the box's push on the table is the table's push on the floor.  
A) True B) False
- \_\_\_\_\_ 3) In order to get an object moving, you must push harder on it than it pushes back on you.  
A) True B) False
- \_\_\_\_\_ 4) If you pound a feather with a hammer, which one feels a greater force?  
A) always the feather B) always the hammer C) The size of the force is always exactly the same on both of them. D) If the feather moves, then it felt the greater force. Otherwise the force was the same on both.
- \_\_\_\_\_ 5) You are in a train traveling on a horizontal track and notice that a piece of luggage starts to slide directly toward the front of the train. From this observation, you can conclude that this train is  
A) speeding up. B) slowing down. C) changing direction. D) speeding up and changing direction. E) slowing down and changing direction.
- \_\_\_\_\_ 6) While flying horizontally in an airplane, you notice that a string dangling from the overhead luggage compartment hangs at rest at  $15^\circ$  away from the vertical toward the front of the plane. Using this observation, you can conclude that the airplane is  
A) moving forward. B) moving backward. C) accelerating forward. D) accelerating backward. E) not accelerating because the string is at rest.
- \_\_\_\_\_ 7) An elevator suspended by a vertical cable is moving downward but slowing down. The tension in the cable must be  
A) greater than the weight of the elevator. B) less than than the weight of the elevator. C) equal to the weight of the elevator.

**True/False**

*Indicate whether the statement is true or false.*

5.1 Conceptual Questions

- 8) You pull on a crate with a rope. If the crate moves, the rope's pull on the crate must have been larger than the crate's pull on the rope, but if the crate does not move, both of these pulls must have been equal.  
A) True B) False
- 9) In order to lift a bucket of concrete, you must pull up harder on the bucket than the bucket pulls down on you.  
A) True B) False
- 10) If the rockets of a spaceship in outer space (far from all gravity) suddenly lose power and go off, the spaceship will gradually slow to a stop.  
A) True B) False