Name:

Laws of Motion

1.

When an unbalanced force acts on an object, the force
 a. changes the motion of the object.
 b. is cancelled by another force.
 c. does not change the motion of the object.
 d. is equal to the weight of the object.

2.

The tendency of an object to stay in motion or at rest until a force acts upon it is _____.
 a. frame of reference
 b. movement
 c. relation
 d. inertia

3.

A force that resists motion created by objects rubbing together is _____.
 a. gravity
 b. friction
 c. speed
 d. force

4.

Newton's law of motion that describes action-reaction pairs is the
 a. first law.
 b. second law.
 c. third law.
 d. law of gravity.

5.

Newton's second law of motion states the relationship of mass, acceleration, and force. It states that
 a. force equals mass divided by acceleration.
 b. force equals acceleration divided by mass.
 c. force equals mass times acceleration.
 d. every object attracts every other object in the universe.

6.
According to Newton's third law of motion, when a hammer strikes and exerts force on a nail, the nail
 a. creates a friction with the hammer.
 b. disappears into the wood.
 c. exerts an equal force back on the hammer.

7.
A magician suddenly jerks a tablecloth out from under the dishes on a table. This best demonstrates
 a. an action-reaction pair of forces.
 b. that the dishes have inertia.
 c. that gravity tends to hold the dishes securely.
 d. that the dishes have no acceleration.

8.
Earth exerts a force on a flea equal to the flea's weight, W. According to Newton's Third Law of Motion, how much force does the flea exert on Earth?
 a. much less than W
 b. a little less than W
 c. exactly W
 d. a lot more than W

9.
If a wagon is accelerating at a rate of $2m/s^2$$2m/s2$, what is the mass of the wagon if the force acting on it is 20 N?

10.
A friend tells you that a rowboat is propelled by the force of its oars against the water. First, explain whether the statement is correct, and then identify the action and reaction forces.