Identify the letter of the choice that best completes the statement or answers the question.

1. 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. exerts an equal force back on the hammer.
   c. disappears into the wood.
   d. moves at a constant speed.
2. Which law can explain how gases released from burning fuel in a rocket produce thrust?
   a. Newton's second law of motion
   b. Newton's first law of motion
   c. Newton's third law of motion
   d. the law of conservation of momentum
3. The law of universal gravitation states that any two objects in the universe, without exception,
   a. attract each other.
   b. repel each other.
   c. create friction.
   d. combine to provide a balanced force.
4. Two figure skaters who push off of each other will move at the same speed if
   a. they push with the same force.
   b. there is no air resistance.
   c. the ice does not cause any friction.
   d. they have the same mass.
5. The force of gravity on a person or object at the surface of a planet is known as
   a. air resistance.
   b. mass.
   c. weight.
   d. inertia.
6. The greater the mass of an object,
   a. the more balanced it is.
   b. the more space it takes up.
   c. the easier the object starts moving.
   d. the greater its inertia.
7. The force that one surface exerts on another when the two rub against each other is called
   a. friction.
   b. acceleration.
   c. inertia.
   d. gravity.
8. A place or object used for comparison to determine if something is in motion is called
   a. a position.
   b. velocity.
   c. a reference point.
   d. a constant.
9. The rate at which velocity changes is called
   a. acceleration.
   b. motion.
   c. direction.
   d. speed.
10. The metric unit that is most often used to describe weight is the
   a. Kilogram (kg)
   b. Pound (lbs)
   c. Newton (N)
   d. Ounce (oz)