Name: Date

Newton's Laws of Quiz

Multiple Choice *Choose the best answer for each of the questions.*

1. You are in an airplane when the engines fail. Which of the following will likely happen?
   (a) Your plane will immediately fall out of the sky.
   (b) Your plane will continue to glide as it slowly loses velocity and altitude.
   (c) Your plane will go into a dive immediately.
   (d) Your plane will catch fire and burn up.

2. A net external force of 50 Newtons acts on a 10-kilogram object. The object must be -
   (a) accelerating
   (b) moving at a constant speed
   (c) at rest
   (d) moving backward.
   (e) it is impossible to tell.

3. Billy-Bob is hit by a train. Which of the following forces is greatest?
   (a) The force the train puts on Billy-Bob.
   (b) The force that Billy-Bob puts on the train.
   (c) Both forces are equal.
   (d) it is impossible to tell.

4. Friction is best defined as -
   (a) Heat.
   (b) A force that causes objects to slow down.
   (c) The destruction of energy.
   (d) the process by which objects return to their natural resting state.

5. Sebastian is in space. Which of the following is true?
   (a) He has weight but no mass.
   (b) He has mass but not weight.
   (c) He has neither weight nor mass.
   (d) He has both weight and mass.

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True or False *Mark each question as either TRUE or FALSE*

_____ 1. When you kick a ball in an open field, there is a force that keeps the ball moving.

_____ 2. When a man is walking forward, the frictional force acting on the man is always backward.

_____ 3. If an object is at rest, there must be no forces acting on the object.

_____ 4. The force of gravity on earth is 9.81 m/s^2

_____ 5. A rocket takes off because its exhaust gasses push against the ground.

_____ 6. Mike the alien has a mass of 50kg on his planet, but his planet's gravity is only half as strong as the Earth's. On Earth, he will have a mass of 100 kg.

_____ 7. If there is no force acting on an object, the object must be at rest.

_____ 8. An unbalanced, external force will always cause an object to speed up or slow down.

_____ 9. The normal force is always equal to the gravitational force.

____ 10. Mass and weight measure the same thing, just in different units.

Total Points Earned: _____

Corrected by: _____