

Newton's First Law

Name _____

1. A force is a _____ or a _____ that results in a change in the _____ of an object.
2. Tell whether or not there is a force acting on the following objects. If there is a force, tell what is producing the force.
 - A car going uphill –
 - A car going downhill –
 - An asteroid orbiting the sun –
 - A comet moving at constant velocity in deep space –
3. An entertainer sets a table with heavy dishes and then quickly jerks the tablecloth out from under them. The dishes stay on the table. Why?
4. Would the entertainer in #3 be able to perform his trick if he used foam plates instead? Explain.
5. What does Newton's First Law of Motion state?
6. What forces act on a bicycle that is coasting slowly to a stop?
7. If you kick a bowling ball with your bare foot and then kick a beach ball with your bare foot, which one would hurt most? _____ Which one has the most inertia? _____
8. If forces result in a change in motion, is it possible for an object to remain at rest while being acted upon by forces? _____ Explain:
9. What does an unbalanced force cause an object to do?
10. Which has the most inertia, a bus or a car? _____ Why?