Name _____ Date _____ Period ____

Newton Short Answer Problems
USE COMPLETE SENTENCES!

1. Imagine a place in the *cosmos* far from all gravitational and frictional influences. Suppose that you visit that place (just suppose) and throw a rock. The rock will:
a. gradually stop.
b. continue in motion in the same direction at constant speed.

2. A 2-kg object is moving horizontally with a speed of 4 m/s. How much net force is required to keep the object moving at this speed and in this direction? Why?

3. Mac and Tosh are arguing in the cafeteria. Mac says that if he flings the Jell-O with a greater speed it will have a greater inertia. Tosh argues that inertia does not depend upon speed, but rather upon mass. Who do you agree with? Explain why.

4. Supposing you were in space in a *weightless environment*, would it require a force to set an object in motion?

5. Fred spends most Sunday afternoons at rest on the sofa, watching pro football games and consuming large quantities of food. What effect (if any) does this practice have upon his inertia? Explain.

6. Ben McDonald is being chased through the woods by a moose which he was attempting to photograph. The enormous mass of the moose is extremely intimidating. Yet, if Ben makes a zigzag pattern through the woods, he will be able to use the large mass of the moose to his own advantage. Explain this in terms of inertia and Newton's first law of motion.

7. Two bricks are resting on edge of the lab table. Without lifting them, Josh is able to tell which one is more massive by giving each a push. Explain how he can be led to this conclusion even though his puny arms are too weak to lift the blocks.