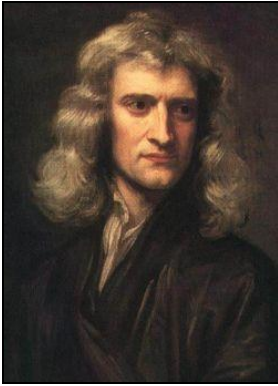


## Homework on the Laws of Motion

### Week #1



*Portrait of Isaac Newton*

Although the laws of motion and universal gravitation became Isaac Newton's best-known discoveries, he warned against using them to view the universe as a mere machine. He said, "Gravity explains the motions of the planets, but it cannot explain who set the planets in motion. God governs all things and knows all that is or can be done."

His scientific fame notwithstanding, Newton's study of the Bible and of the early Church Fathers were among his greatest passions. He devoted more time to the study of the Scriptures, than to science, and said, "I have a fundamental belief in the Bible as the Word of God, written by those who were inspired. I study the Bible daily."

1. What is the name of the scientist who discovered the three laws of motion?  
\_\_\_\_\_
2. Inertia means that things keep on doing what they are doing whether they are \_\_\_\_\_ or \_\_\_\_\_ until something happens to them.
3. You are outside playing with your brother or sister. You push them around the yard on their bicycle. What causes the force to move the bicycle? \_\_\_\_\_
4. Label each of the following statements with the correct number of the law being described.
  - a. \_\_\_\_\_ Law of Motion states that when an object is acted upon by a force, it will either start to move, speed up, or slow down, or change directions.
  - b. \_\_\_\_\_ Law of Motion states that when a force is applied to an object, the object applies an equal and opposite force.
  - c. \_\_\_\_\_ Law of Motion states that an object at rest stays at rest, and an object in motion stays in motion, unless an outside force acts upon the object.
5. All forces either \_\_\_\_\_ or \_\_\_\_\_.
6. What is the force that keeps us from flying off the earth and into space? \_\_\_\_\_.
7. Is gravity always working, or does it only work some of the time? \_\_\_\_\_.
8. If dropped from a six-story building, which would hit the ground first?
  - a) a cannon ball OR b) a watermelon

*(Please turn over)*

9. What was the name of the scientist who completed experiments in the 1500's to Answer the question in #8?
10. The scientist in #9 discovered that the pull of the earth's \_\_\_\_\_  
Called G-force, moves everything toward the earth at the same rate, no matter how much the object weighs.

*Answers: Please check your work for accuracy AFTER you have completed it!*  
*1)Isaac Newton 2)moving, still 3)you 4)  $a=2^{nd}$ ,  $b=3^{rd}$ ,  $c=1^{st}$ , 5)pull, push 6)gravity*  
*7)all 8)a tie, they both land at the same time 9)Galileo 10)gravity*

