

**PHYSICAL SCIENCE**  
**NEWTON'S LAWS WORKSHEET**

**NAME** \_\_\_\_\_

**I. NEWTON'S FIRST LAW OF MOTION**

1. Newton's first law of motion is also known as the LAW OF \_\_\_\_\_.
2. Newton's first law says that
  - a. an object that IS NOT MOVING, or is at \_\_\_\_\_, will stay at \_\_\_\_\_, **AND**
  - b. an object that IS MOVING will keep moving with constant \_\_\_\_\_, which means at the same \_\_\_\_\_ and in the same \_\_\_\_\_, **UNLESS**
  - c. an \_\_\_\_\_ force acts on that object.
3. What is inertia?
4. What property of an object determines how much inertia it has?
5. Which of the following has more inertia?
  - a. Bowling ball            or            Tennis ball
  - b. Hammer                or            Feather

**II. NEWTON'S SECOND LAW OF MOTION**

6. Newton's second law of motion is also known as the LAW OF \_\_\_\_\_.
7. Newton's second law says that when an \_\_\_\_\_ force is applied to a \_\_\_\_\_, it causes it to \_\_\_\_\_.
8. The greater the force that is applied, the \_\_\_\_\_ the acceleration.
9. The lesser the force that is applied, the \_\_\_\_\_ the acceleration.
10. If the same force is applied to an object with a large mass, it will have a \_\_\_\_\_ acceleration.
11. If the same force is applied to an object with a small mass, it will have a \_\_\_\_\_ acceleration.
12. The equation that is used to solve second law problems is  **$F = ma$** .
  - a. What do each of the variables mean?  
F = \_\_\_\_\_            m = \_\_\_\_\_            a = \_\_\_\_\_
  - b. What unit of measurement must be used with each variable?  
F = \_\_\_\_\_            m = \_\_\_\_\_            a = \_\_\_\_\_

**III. NEWTON'S THIRD LAW OF MOTION**

13. Newton's third law of motion is also known as the LAW OF \_\_\_\_\_.
14. Newton's third law says that every time there is an \_\_\_\_\_ force, there is also a \_\_\_\_\_ force that is \_\_\_\_\_ in size and acts in the \_\_\_\_\_ direction.
15. Newton's third law states that forces must ALWAYS occur in \_\_\_\_\_.
16. Listed below are ACTION forces. Tell the REACTION force.
  - a. Your bottom pushing on your desk seat
  - b. A bat hitting a baseball
  - c. Your finger pressing on your phone screen while texting