NAME _____

NEWTON'S LAWS WORKSHEET

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 = _____

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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.

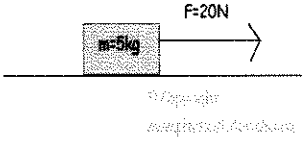
    a. Your bottom pushing on your desk seat

    b. A bat hitting a baseball

    c. Your finger pressing on your phone screen while texting

IV. UNDERSTANDING.....

Label each of the following images/descriptions below as being examples of 1st, 2nd, or 3rd law. Then EXPLAIN your answer!



F=m.a
20N=5kg.a
a=4m/s.s

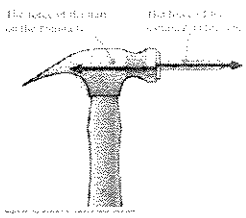
1st law 2nd law 3rd law

Explanation:

_____

_____

_____



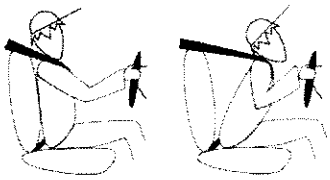
1st law 2nd law 3rd law

Explanation:

_____

_____

_____



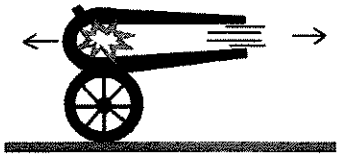
1st law 2nd law 3rd law

Explanation:

_____

_____

_____



1st law 2nd law 3rd law

Explanation:

_____

_____

_____