

Name: _____

Date: _____

Period: _____

Newton's Laws of Motion

Definitions

- kinematics
- dynamics
- directly proportional
- inversely proportional
- force
- free-body diagram
- inertia
- mass
- weight

Newton's Laws

Newton's First Law (NFL)

Every object _____ in its state of _____ or _____ in a straight line as long as no net force acts on it.

Newton's Second Law (NSL)

The acceleration of an object is

- directly proportional to _____ acting on it.
- inversely proportional to its _____
- pointing in the _____ as the net force

Newton's Third Law (NTL)

Whenever one object exerts a force on a second object, the second object exerts an _____ force on the first object in the _____ direction.

Short form: