

Newton's Laws of Motion Objectives

Students should be able to:

1. analyze situations where a particle remains at rest, moves with a constant velocity or accelerates under the influence of several forces.
2. calculate the change in velocity of an object moving in one direction when specified forces act.
3. draw a free body diagram labeling all forces acting.
4. write a relationship using Newton's 2nd Law to solve for an unknown quantity.
5. solve for frictional, normal and components of weight for an object on an incline.
6. analyze situations with objects on inclines to determine when an object will begin to accelerate.
7. identify action and reaction pairs.
8. apply Newton's 3rd Law in analyzing the force of contact between two objects accelerating together.