Mr. Hie’s Force Practice

# Forces

Acceleration is the rate velocity changes. Objects accelerate when they are either speeding up or slowing down.

***V2 = A\*DeltaT + V1 D2 = Vaverage\*DeltaT + D1 Vaverage = (V1 + V2)/2***

***If the starting speed, V1, is zero, then DeltaD = ½\*A\*DeltaT^2***

Forces are pushes or pulls. The net force, Fnet, is the total of all the forces added together.

***Fnet = F1 + F2 + …***

Keep in mind direction. For example, If one person pushes right with 100N of force and another person pushes on the same object left with 150N, the net force is 100N + -150N = -50N because we can count left as negative.

The net force is very important because it is related to the acceleration using the equation:

***Fnet = m\*a***

# Applying to Weight

If you have done Mr. Hei’s Acceleration Practice, you already know the acceleration due to gravity. (You could also do independent research.) If you also know your own mass, you could use that to calculate the force pulling down on you.

**Q1.** Calculate the net force on you if gravity is pulling you down with its normal acceleration.

**Q2.** What is the net force on you if you are standing in one place. Explain why they are different even though gravity is always there.