PS Physics – Unit 1B

Forces and Motion

What is \_\_\_\_\_\_\_\_\_\_\_?

* A \_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_ that acts on an object
* Can cause a \_\_\_\_\_\_\_\_\_\_\_\_\_\_ object to move
* Can \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ a moving object
  + By changing its \_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_

How is \_\_\_\_\_\_\_\_\_\_\_\_ measured?

* Spring scale
  + Stretch of the spring depends on the mass of the object acting on it
* Unit of Force
  + \_\_\_\_\_\_\_\_\_\_\_\_ (N)
    - 1 kg to accelerate 1 m/s2

How is force represented?

* Use arrows
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
    - Length represents \_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Combining Forces

* Forces in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ direction are \_\_\_\_\_\_\_\_\_\_\_\_\_ together
* Force in the \_\_\_\_\_\_\_\_\_\_\_\_\_ direction are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* The result is “\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_”…
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ force acting on an object

Balanced vs. Unbalanced Forces

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to produce a net force of \_\_\_\_\_\_\_\_\_\_\_
  + No change in the object’s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Net force equals the size of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ minus the size of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Net force does not equal \_\_\_\_\_\_\_\_\_\_\_\_\_
  + Causes an object to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Friction

* Force that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the motion of objects that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ as they move past each other
* Acts at the \_\_\_\_\_\_\_\_\_\_\_\_\_ where objects are in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* 4 types of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4 Types of Friction

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_ friction
  + Force that acts on objects that are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Always acts in the direction \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to that of the applied force
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ friction
  + Force that opposes the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of an object as it \_\_\_\_\_\_\_\_\_\_\_\_ over a surface
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ friction
  + Change in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ at the point of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ friction
  + Opposes the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ of an object through \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Increases the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the object moving through the \_\_\_\_\_\_\_\_\_\_\_\_
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (gas and liquids)

Gravity

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that acts between two \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ force
  + Pulls objects \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Earth’s gravity
  + Acts \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ towards the center of the earth

Gravity and Falling Objects

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ causes objects to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ downward
* Air resistance (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_) acts in the direction \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to the motion and reduces \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ velocity
  + Constant velocity of a falling object when force of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ equals \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Projectile Motion

* Motion of a falling object after given an initial \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Causes a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_