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 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_