PS Physics – Unit 1A

Motion

How do you know something is moving?

* Depends on your \_\_\_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* A \_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the location from which motion is observed.
* Most common: the earth.

Measuring distance

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_: the length of a path between \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Can be expressed in any number of \_\_\_\_\_\_\_\_\_\_\_\_\_.
* Choose a \_\_\_\_\_\_\_\_\_\_\_\_ that is best suited for the motion being described.
* Examples: meters, kilometers, centimeters

Measuring \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is independent of the path taken by the object.
* Involves the \_\_\_\_\_\_\_\_\_\_\_\_ point, \_\_\_\_\_\_\_\_\_\_\_\_ point, and direction. *Vector* quantity

Adding \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* A *\_\_\_\_\_\_\_\_\_\_\_\_\_* is a quantity that has both \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and direction
* When the vectors are along the same plane they are added arithmetically.
* Many different methods for adding vectors that do not lie in the same plane.

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

* The ratio of \_\_\_\_\_\_\_\_\_\_\_\_\_\_ an object moves to the amount of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ it takes to move that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* How fast or slow an object is traveling.

Average Speed

* Defined as the total \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ / total \_\_\_\_\_\_\_\_\_\_\_\_\_\_. Or…
	+ *v* = d/t

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ speed

* Not as useful in physical science. Much more difficult to calculate.
* Defined as the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ at a given moment in \_\_\_\_\_\_\_\_\_\_\_\_\_.

Graphing motion

* Distance-time graphs.
	+ The slope of a line on a distance-time graph is the speed.
		- s = d/t

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ vs \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is speed in a given \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* MUST have a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Considered a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ quantity

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

* A situation in which the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is changing.
* “Speeding up or slowing down”
* Science definition: the rate of \_\_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Can be both \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ quantity.

What is the formula for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_?

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = final velocity – original velocity

 time

* + Or… the change in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Δ v) / change in \_\_\_\_\_\_\_\_\_\_\_\_ (Δt)

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

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ due solely to the force of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* All objects \_\_\_\_\_\_\_\_\_\_\_ at the same \_\_\_\_\_\_\_\_\_\_\_\_\_.
* 9.8 m/sec2

Graphing \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* A graph for constant \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ always a **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**
* A graph for constant \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ always a **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**