**One Dimensional Motion Notes-** *Complete using Power Point & attach in your notebook*

The position of any object *must* be given with respect to some \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

An object’s position is its directed \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from a reference point.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is said to have occurred when the position of an object with respect to a given reference point has changed.

This change in position of an object is often called its \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Displacement, then, is a \_\_\_\_\_\_\_\_\_\_\_ quantity.

Distance, or \_\_\_\_\_\_\_\_\_\_\_\_, is a scalar.

In one dimensional motion, the displacement direction is often given as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

A displacement of +3.5 m implies movement of 3.5 m in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ direction.

A displacement of \_\_\_\_\_\_\_\_\_\_\_ implies movement of 3.5 m in the negative direction.

Positive and negative directions are chosen \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, but usually agree with standard mathematical conventions.

The average velocity of an object is defined to be the ratio of its change in position to the time taken to change the position.

Velocity formula: Vav =

Δd =

Δt =

The “\_\_\_\_\_\_\_\_\_\_” of the velocity indicates the direction of movement.

A positive sign indicates movement in the \_\_\_\_\_\_\_\_\_\_\_\_\_ direction.

A negative sign indicates movement in the negative \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Speed is the *\_\_\_\_\_\_\_\_\_\_\_\_\_* of velocity. *(This means amount!)*

It is a \_\_\_\_\_\_\_\_\_\_\_ and has no direction given with it.

Average speed is the total distance traveled *divided by* the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Average velocity is the total \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ *divided by* the total time taken.

Average speed and average velocity are generally \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ because total distance and total displacement are generally not the same.

When would they have the same magnitudes?

Speed is the absolute value of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

It is *always* a \_\_\_\_\_\_\_\_\_\_\_ value.

If an object *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_* its speed while traveling in the *negative direction*, its velocity actually *decreases*.

If an object *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_* its speed while traveling in the *negative direction*, its velocity actually *increases*.