**Acceleration**

When an object’s motion is not a constant velocity the object is not in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Non-uniform motion occurs when the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Since velocity is a vector the change in velocity can be in the positive direction or the negative direction.

**Example:**

You’re riding your bike at 6m/s forward then speed up to go 9m/s forward. What is your change in velocity?

**Example:**

You apply the brakes on your bike to slow down from 9m/s forward to 2m/s forward. What is your change in velocity?

When moving at a constant velocity, you are unable to “feel” the movement. When undergoing non-uniform motion your body will feel the push or pull of changing your velocity.

Acceleration is described as the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of velocity. In other words it is how much you change your velocity over a time interval:

Acceleration is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Comparing Acceleration:**

A dragster and an old style car both accelerate from rest to 60km/h.

What is their change in velocity?

Which do we expect to reach 60km/h first?

Which one had a greater acceleration?

**Positive Acceleration:**

A change the velocity in the positive direction: Increasing speed in the positive direction, or slowing down when going in the negative direction.

**Negative Acceleration:**

A change the velocity in the negative direction. Slowing down in the positive direction, or speeding up in the negative direction.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is always considered as “slowing down”. This would make the acceleration in the opposite direction of the velocity.

Homework: CYU p.391 #1-10