

HW  
8/7/21

## Home Assignment

1) An object experiences a net zero external unbalanced force. Is it possible for the object to be travelling with non-zero velocity? If yes, state the condition that must be placed on the magnitude & direction of the velocity. If no provide a reason.

Yes an object may travel with a non-zero velocity even when the net external force on it is zero. An object moving in some direction with constant velocity will continue in its state of motion as long as there are no external unbalanced forces acting on it. In order to change the motion of the object, some external unbalanced force must act upon it.

2) Differentiated between balanced & unbalanced force?

<u>Balanced Force</u>	<u>Unbalanced Force</u>
> Equal in magnitude	> Unequal in magnitude.
> Opposite in direction	> Can be in any direction but opposite
> Does not cause any change in the state of motion of the object.	> Causes change in the state of motion of the object.