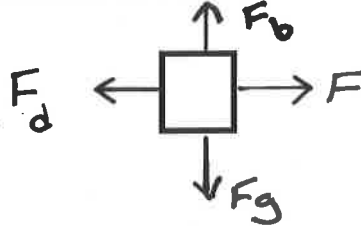


1. Draw and label all forces acting on the object. If you can't name the force, don't draw the force.
2. State whether the net force is zero or non-zero.
3. Write the f_{net} equations for the diagram.

1. A rightward force is applied to a boat in order to move it through the water at constant velocity. Consider resistance forces due to the water. Neglect air resistance.

$$F_x NET = 0$$

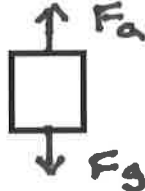
$$F - F_d = 0$$



$$F_y NET = 0$$

$$F_b - F_g = 0$$

2. A skydiver is descending with a constant velocity. Consider air resistance



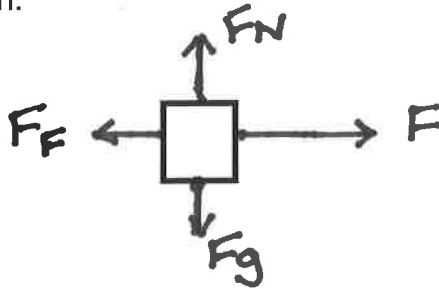
$$F_y NET = 0$$

$$F_{air} - F_g = 0$$

3. A force is applied to the right to drag a sled across loosely-packed snow (friction) with a rightward acceleration.

$$F_x Net \neq 0$$

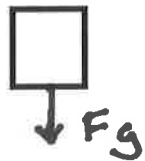
$$F - F_f \neq 0$$



$$F_y NET = 0$$

$$F_N - F_g = 0$$

4. A football is moving upwards towards its peak after having been booted by the punter. Neglect air resistance.

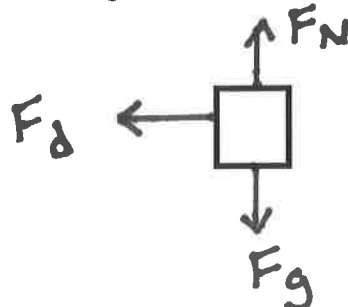


$$F_y net = F_g$$

5. A car is coasting to the right and slowing down.

$$F_x net \neq 0$$

$$F_d \neq 0$$



$$F_y net = 0$$

$$F_N - F_g = 0$$