

Note: Write in your fair Notebook

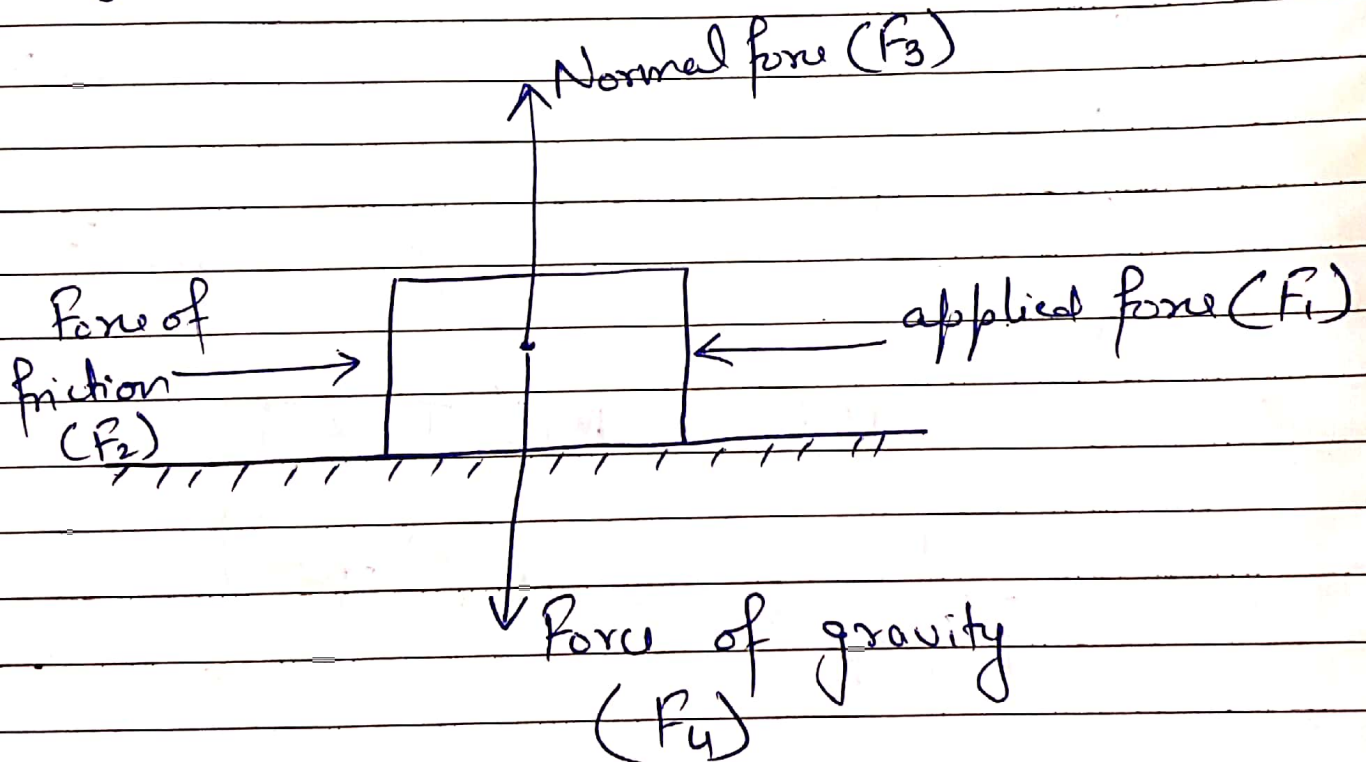
## Types of Force

Balanced force

Unbalanced force

\* Balanced force:

Balanced force are the force that does not cause the motion of the body i.e net force on the body is zero.



Calculation in x-direction

$$\begin{aligned} \text{Net force} &= \text{Applied force} - \text{force of friction} \\ &= F_1 - F_2 = 0 \end{aligned}$$

(If  $F_1 = F_2$ )

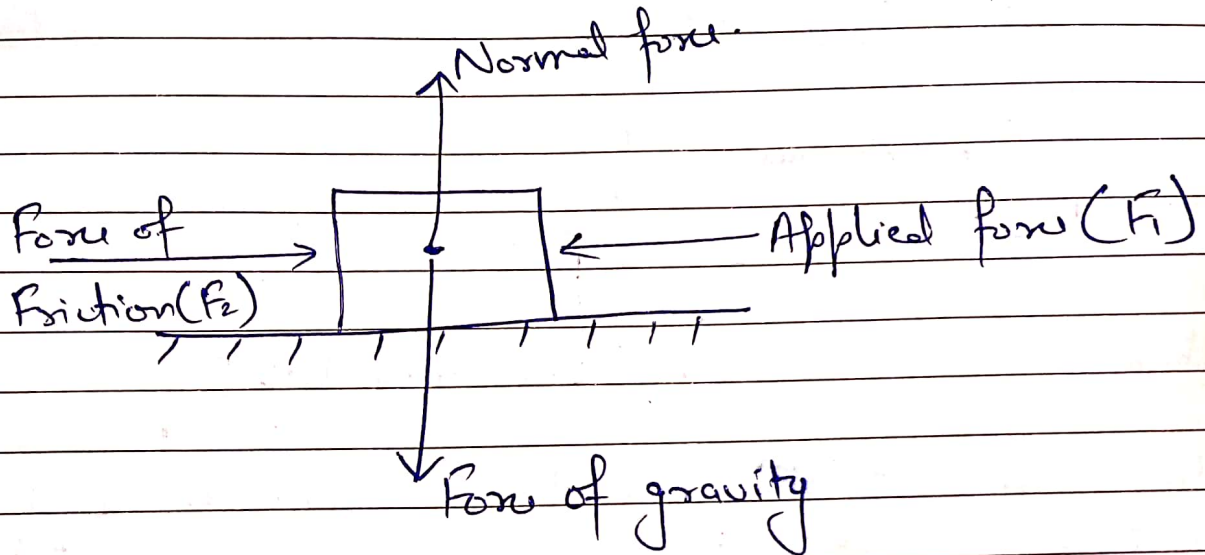
In y-direction

Date .....

$$\begin{aligned} \text{Net force} &= \text{Normal force} - \text{force of gravity} \\ &= F_3 - F_4 = 0 \end{aligned}$$

\* Unbalanced force :

Unbalanced forces are the forces in which the net force of the body is not equal to zero.  
→ Motion exist due to unbalanced force.



Calculation of net force in x-direction

$$\begin{aligned} \text{Net force} &= F_1 - F_2 \\ &\text{if } F_1 > F_2 \end{aligned}$$

$$\text{Net force} \neq 0$$

\* If a set of force acting on a body produce no acceleration in it, the forces are said to be balanced.

\* If produce non-zero acceleration, the forces are said to be unbalanced.