



FREE BODY DIAGRAM



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DEPARTMENT OF PHYSICS
MECHANICS 1 –FIRST SEMESTER
2021**

1. A box is at rest on a table.

2. A rightward force is applied to the box in order to move it across the table with rightward acceleration. (Ignore Air Resistance)

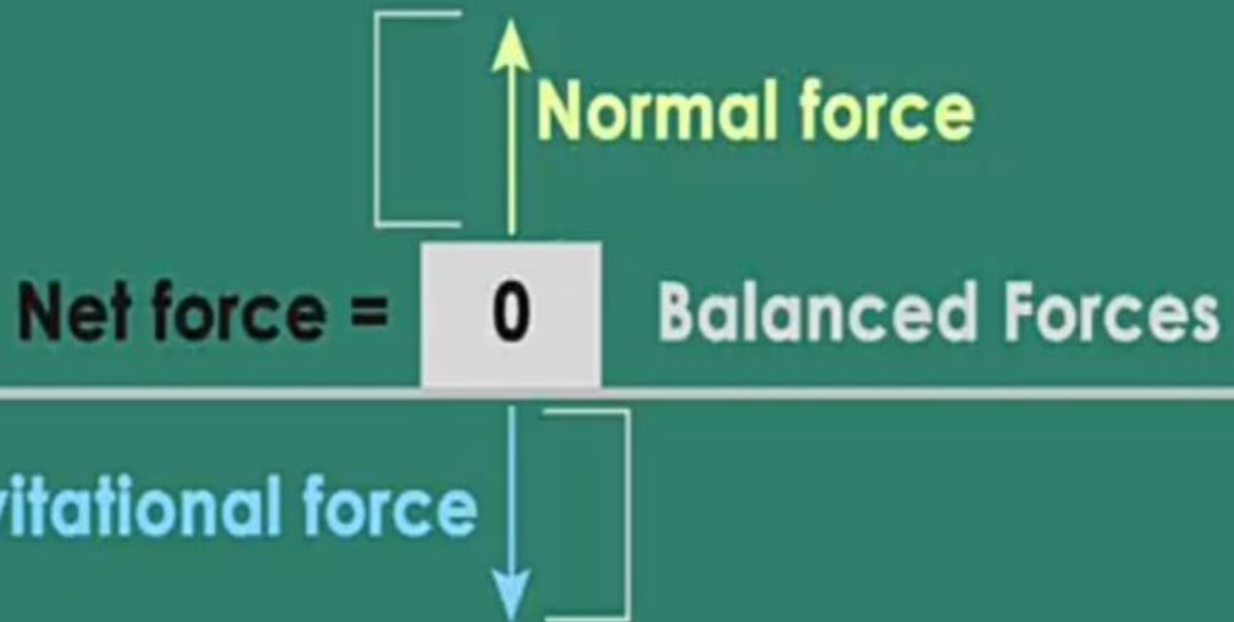
3. A box on the table is moving towards the right at constant velocity. (Ignore Air Resistance)

4. A skydiver is descending with constant velocity.

5. An egg is free falling from a nest in a tree.

1. A box is at rest on a table.

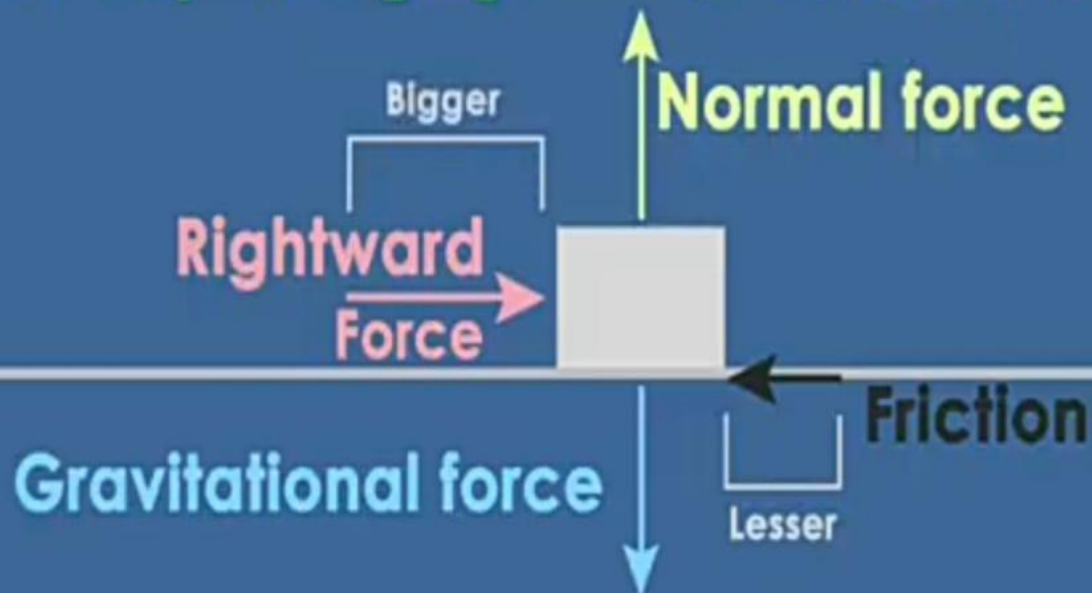
Remain at rest



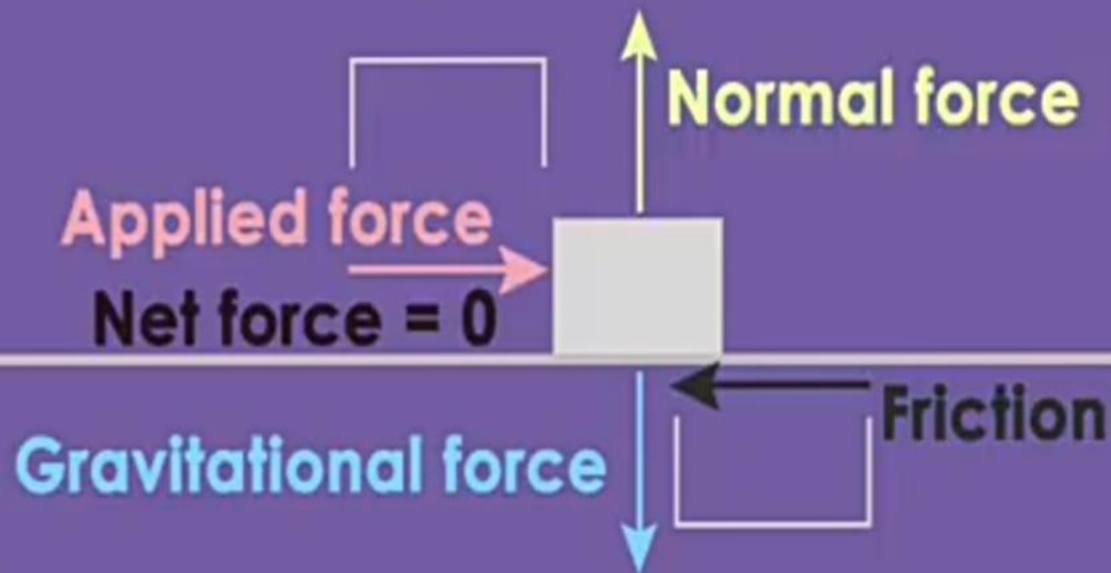
2. A rightward force is applied to the box in order to move it across the table with rightward acceleration. (Ignore Air Resistance)

Acceleration

- Velocity changing \longrightarrow Forces unbalanced



3. A box on the table is moving towards the right at constant velocity. (Ignore Air Resistance)



4. A skydiver is descending with constant velocity.

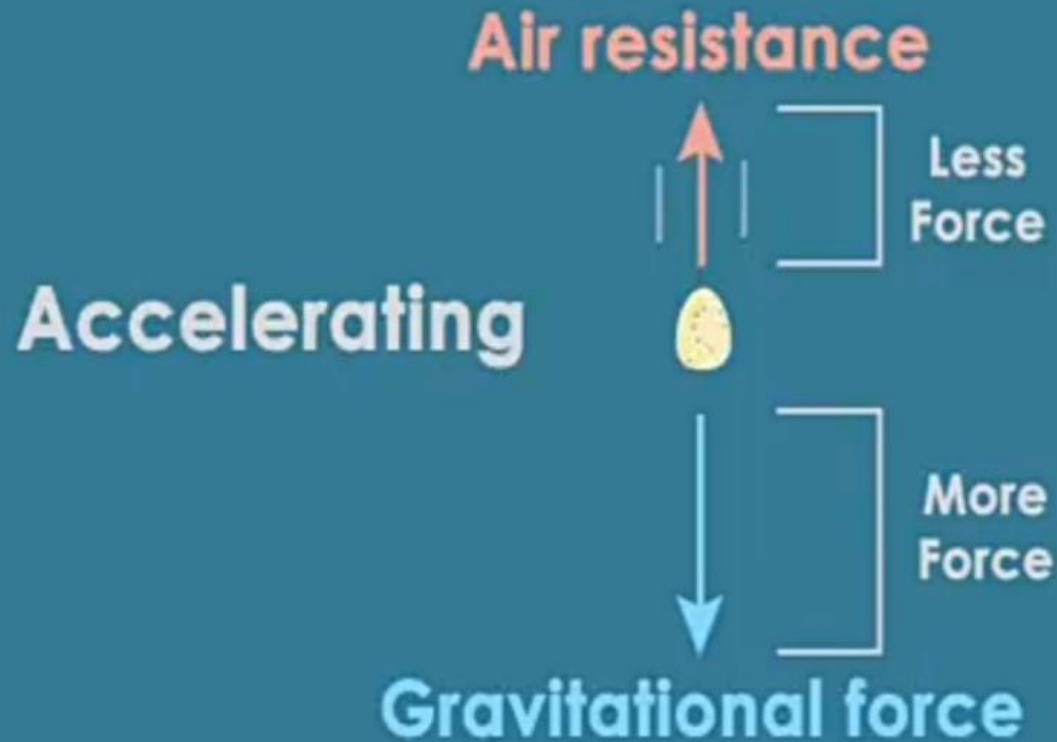
Air resistance



Net force = 0

Gravitational force

5. An egg is free falling from a nest in a tree.





THANKYOU