

**Class 9**  
**Moment notes**  
**Physics**

*moment = force x distance perpendicular to line of action of force*

With greater moment, the turning effect is greater. So, object can topple over.

Principle of moment states:

Sum of clockwise moment = sum of anticlockwise moment

About a pivot for the object to be in equilibrium

Q. Math sum done

Ans:

$$700N = (400 \times 2) + (600 \times d)$$

$$1400 - 800 = 600d$$

$$d = \frac{600}{600}$$

$$d = 1 \text{ m}$$

Centre of gravity: point in a mass through which its whole weight acts upon

Moment has no turning effect about pivot at centre of gravity.

Stability: ability of an object to retain its original position after being tilted slightly.

Types of equilibrium:

- Stable
- Unstable
- Neutral