

CLASS IX
CH#9, FORCE AND LAWS OF MOTION

1. What is force, what is its SI unit?
2. What is balanced and unbalanced force
3. State Newton's first law of motion
4. State Newton's second law of motion.
5. State Newton's III law of motion.
6. What is momentum? Its SI unit?
7. Explain why some of the leaves may get detached from a tree if we vigorously shake its branch
8. From a rifle of mass 4 kg, a bullet of mass 50 g is fired with an initial velocity of 35 m/s. Calculate the initial recoil velocity of the rifle
9. Why is it advised to tie any luggage kept on the roof of a bus with a rope?
10. A truck starts from rest and rolls down a hill with a constant acceleration. It travels 400 m in 20 s. Find its acceleration. Find the force acting on it if its mass is 7 tons (Hint : 1 ton = 1000 kg).
11. Explain the following with reason
 - a. A cricket player moves his hand backward while catching a fast ball
 - b. Why a person is hit harder when he jumps on a cemented floor than a muddy floor
 - c. Why do you fall in the forward direction when a moving bus brakes to a stop and fall backwards when it accelerates from rest?
 - d. Explain why it is dangerous to jump out of a moving bus