

Newton's Laws of Motion

Physics

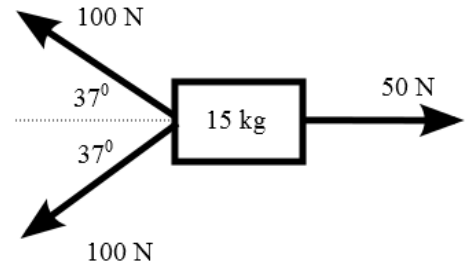
Review

RBRHS

1. Define inertia.
2. State Newton's First Law.
3. State Newton's Second Law.
4. State Newton's Third Law.
5. Two forces are exerted on a block of mass 15 kg as shown in the figure below. Find the magnitude and direction of the resultant force. Determine the magnitude and direction of the acceleration of the block.



6. For the following figure, determine the magnitude and direction of the resultant force and the magnitude and direction of the resultant acceleration.



7. A vehicle of mass 1200 kg moving with a speed of 25 m/s accelerates to a speed of 35 m/s in 2 s . Determine the average force exerted on the vehicle during this time interval.
8. A vehicle of mass 1200 kg moving with a speed of 25 m/s accelerates to a speed of 35 m/s in 2 s . Determine the average force exerted on the vehicle during this time interval.
9. A vehicle of mass 1500 kg moving with a speed of 10 m/s accelerates to a speed of 20 m/s covering a distance of 40 m . Determine the force exerted on the vehicle while it is accelerating.
10. When an object is in equilibrium, the net force on the object is zero. Determine the magnitude and direction of the force necessary to keep the block in problems 4 and 5 in equilibrium.