Solving Problems Involving Newton's Laws of Motion

Newton's Laws of Motion is a matter of most common experience while performing any action or seeing an action being performed. Therefore, every action whether in equilibrium, uniform motion or acceleration will involve the Laws of Motion in one or the other way. Therefore, possibility of encountering a problem or situation never encountered earlier is infinite. In view of this while attempting solution of problems one must be ready to analyze it with pure ingenuity. Nevertheless, typical questions have been drawn to inculcate practice of handling problems with basic concepts and their application, and accordingly illustrations to the answers have been developed.

It is essential to iterate that typical question may, at times, contain certain information, not needed in solution. Likewise, one might make a start applying concepts in apparently identical situation. But, where to proceed with it for the solution or drop it is an important decision to avoid solution either becoming complex or incorrect. Likewise, values of universal constants like g, π etc. are generally given in examinations, but in case it is not there choose a value as per your wisdom and calculations with principles of significant figures and rounding of numbers will be a good enough to write correct answer. It may be observed that certain figures or details are too minimized. But, handling this document give us liberty to manage the space by adjusting size of figures and reader to zoom them as per requirement of clarity. Despite best efforts by authors, one may find it difficult to match the answer arrived at with the one given. It might be an inadvertent typographical despite meticulous efforts. In such a situation remain open to fix the answer by reviewing solution, consultation with colleagues and your teachers. In case considered necessary readers are welcome to scan question and related solution with answer and write us through *Contact Us*.

Analyzing problems by splitting it into different situations given or inbuilt, drawing diagram and writing equations for each case is essential at practice stage. Going forward many of these steps become intuitive. Despite, meticulous and stepwise analysis helps to avoid chances of errors. This is essential to buit comprehension, accuracy and speed necessary for success in competitive examinations.

Last-but-not-the-least understanding concepts from best of the best teachers, books and videos would not help to attain a proficiency in problem solving, unless it is practiced with variety of problems from different sources and discussing them with colleagues or solving their difficulties. This is nothing but imbibing a proficiency in group dynamics involving caring-and-sharing not a sermon on morality but a necessity of improving performance in times ahead.

Education is just not collection of facts. It is ability to observe, think, analyze and apply it in evolving a sustainable solution, on a pedestal of coexistence.

Going forward effort is being made to cover complete scope of physics upto 12^{th} standard and give more practice questions in Online Test and Self Assessment Mode involving topic-wise, section-wise, level-wise and type of questions.

Inputs on any typographical error in question, answer, illustration and/or diversity of scope of the resource material would be gratefully welcomed, in the spirit of Personal Social Responsibility (PSR). All this is being made available as free web-resource in an effort to complement that already available or accessible.

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