

Introduction.

Mathematics is the language of physics. It becomes very easier to describe, understand and apply the physical principles, if we have a good knowledge of mathematics.

For example: Newton's law of gravitation states that everybody in this universe attracts every other body with a force which is directly proportional to the product of their masses and is inversely proportional to the square of the distance between them.

This law can be expressed by a single mathematical relationship $F \propto \frac{m_1 m_2}{r^2}$ or

$$F = \frac{Gm_1 m_2}{r^2}$$

The techniques of mathematics such as algebra, trigonometry, calculus, graph and logarithm can be used to make predictions from the basic equation.

If we are poor at grammar and vocabulary, it would be difficult for us to communicate our feelings, similarly for better understanding and expressing of physics the basic knowledge of mathematics is must.

In this introductory chapter we will learn some fundamental mathematics.