

# Logic and logically consistent manner

[Science](#), [Mathematics](#)



## **What is Logic?**

“ The inherent ability to mentally compare and weigh two or more perceptions and to mentally conclude accurately what is the differences and/or similarities between each perception. ” “ Logic is the science or art of exact reasoning, or of pure and formal thoughts, or of the laws according to which the processes of pure thinking should be conducted and formation and application of general notion. ” Logic is the study of information encoded in the form of logical sentences.

## **Why Symbols Are Important In The Domain Of Mathematics And In The Growth Of Scientific Knowledge?**

Symbols, in the most fundamental sense of the word, can refer to anything which stands for something else (the signified). There could be a natural relation which immediately suggests the relation between a sign and signified or the relation could be arbitrary and chosen through some convention such as words in a language.

Process of symbolization: It is the replacement of something by a symbol for example; one can replace ‘ Mass’ by ‘ m’, a number by ‘ n’. In almost all cases such replacement or naming is conventional and arbitrary. The process of symbolization should not and does not modify or distort that which it stands for.

## **Why we Treat Mathematical Truth as Certain?**

Why logic emphasizes on “ tautologies” rather than contradictions?

Logic is non-contingent, in the sense that they do not depend on any particular accidental features of the world. Physics and the other empirical

sciences investigate the way the world actually is. That no signal can travel faster than the speed of light is depends upon the law of physics. If the laws were different, perhaps this would not have been true. While the principles of logic are derived using reasoning only and their validity does not depends on any contingent features of the world.