Nature of Mathematics

It is not necessary that all subjects have same nature. Mathematics has its unique nature thus on the basis of which we can compare it with other subjects. The basis of comparison of two or more subjects is their nature. We can understand the nature of Mathematics on the basis of following features-

1. Mathematics is a science of space, numbers, magnitude and measurement.

2. Mathematics has its own language. Language consists mathematical terms, mathematical concepts, formulae, theories, principles and signs, etc.

3. Mathematics is a systematised, organised and exact branch of science.

4. Mathematics involves conversion of abstract concepts in to concrete form.

5. Mathematics is the science of logical reasoning.

6. Mathematics does not leave any doubt in the mind of learner about theories, principles concepts etc.

7. Mathematics helps to develop the habit of self-confidence and self reliance in children.

8. Mathematics helps in the development of sense of appreciation among children.

9. Mathematics helps in developing scientific attitude among children.

10. The study of Mathematics gives the training of scientific method to the children.

11. Mathematical knowledge is based on sense organs.

12. It gives accurate and reliable knowledge

13. Mathematical knowledge is exact, systematic, logical, and clear so that once it is captured it can never be forgotton.

14. Mathematical rules, laws and formulae, are universal and that can be verified at any place and time.

15. It develops the ability of induction, deduction and generalisation.

16. Mathematical language is well defined, useful and clear.

17. It draws numerical inferences on the basis of given information and data.

18. Mathematical knowledge is applied in the study of science and in its different branches; for example, physics, chemistry, biology, and other sciences.

19. It is not only useful for different branches of science but also helps in its progress and organisation.

Thus, on the basis of above points we can understand the nature of mathematics and draw conclusion that the structure of mathematics is indeed the basis of its nature and is stronger as compared to other school subjects. That is why its study is essential in school education. Roger Bacon has well said that, "Mathematics is the gate way and key of all sciences."