

# FOUNDATIONS OF MATHEMATICS

## Philosophy

Mathematics is a discipline, the language of which correlates to the structure of creation. As man brings his powers of intellect to bear on his perceptions of discrete objects, intricate structures, and complex patterns that appear in nature, he: (1) abstracts, classifies, and organizes the concepts he derives from the concrete data; (2) reduces these concepts to abstract quantitative symbols and manipulable numerative formulae and operations. He creates a mental system that gives him both analytic and synthetic capabilities: analytic in that it enables him to find diversity within unity, and synthetic in that it enables him to find unity amid diversity. In short, the resulting discipline provides tremendous explanatory and predictive power.

Though man's finitude and fallenness preclude a truly comprehensive understanding, the study of Mathematics leads students to a clearer understanding of the mind and character of God through the varied interrelationships found in creation.

The final ends of Mathematics are: (1) praise to the omniscient and beneficent Creator and (2) stewardship and dominion over the earth. Students array factual data with the higher-order thinking skills concomitant with the Grammar, Dialectic, and Rhetoric stages of the Trivium: clear and precise thought, as well as beautiful and elegant expression. Therefore, we teach for life change: to take captive every thought and make it obedient to Christ, in whom are hidden all the treasures of wisdom and knowledge.

## Mathematics Department Goals

1. Recognize the attributes of God that are revealed by a study of Mathematics.
2. Perceive the utility and the limitations of the discipline of Mathematics.
3. Understand that human standards of measurement testify to the reality of God's perfect knowledge and righteous standard.
4. Progress in logical thinking patterns, problem solving abilities, and elegant expression of the same.
5. Appreciate the role of Mathematics in the historical development of other disciplines and of culture.
6. Develop mathematical faculties to the fullest in order to use such tools in the service of God and man.