

WHAT NORTHSIDE TEACHES STUDENTS ABOUT MATHEMATICS

1. Mathematics is the quantification of God's empirical reality.

Mathematics provides a way to measure and describe some of the characteristics of created reality such as count, order, length, width, height, circumference, area, volume, weight, time, speed, distance, force, and probability, to name just a few of the more obvious objects of study.

2. Mathematics, therefore, is a discovery, not a process of invention.

However, like the virtually infinite practical applications and uses of electricity, so there are virtually limitless applications and uses of mathematics. Pythagoras, for example, formulated his theorem to quantify the reality which he discovered existing between the sum of the squares of the two sides forming the right angle of a triangle and the square of the hypotenuse. Certainly he did not invent, much less create, that relationship.

3. Mathematics incorporates a body of facts and procedures.

Both are critical in arriving at an accurate conclusion. If the student follows all the right procedures for long division but thinks that $3 \times 3 = 10$, he will always get a wrong answer. If he knows the facts but fails to utilize proper procedures, such as performing the internal operations before removing parentheses in algebra, he will likewise arrive at an erroneous conclusion.

4. "New math" is not necessarily bad math.

Many proper and very useful concepts in what is known as "new math" have been rejected by traditionalists. For example, two hours past 11:00 AM we call 1:00 PM, not the military 13:00 hours. We use base 12 every day. The cornerstone of computer language is binary code, which operates on base 2. Set theory and other mathematical ideas associated with new math are very useful. Regrettably, the lack of emphasis on mastery of the facts resulted in many parents and traditional educators throwing out the new baby with the bath water.

5. "Traditional math" is not necessarily good math.

An overemphasis on drilling the facts can also lead to undesirable ends: students get bored because no thinking is encouraged, and they hit a sort of stone wall at Algebra I, since they failed to understand the concepts behind the facts and procedures. An excellent Christian school math program will insure that elementary students grasp the concepts underlying the facts and procedures they master.

6. True mathematics demonstrates absolutism.

The Christian student believes with his whole being that Jesus is "the way, the truth, and the life; no man cometh to the father but by [Him]." He is not a way, but the only way. He therefore embraces the mathematical notion that only one answer is right and that all others are consequently wrong. In higher math there may be several acceptable answers constituting a set of right answers ($X \times X = +1$, where $X = +1$ or $X = -1$), but all answers not in the set are wrong. Feelings and sincerity have no bearing on the correctness of the solution. Few disciplines reward factual and procedural precision as consistently and immediately as mathematics.

7. True mathematics demonstrates that actions have consequences.

The Christian student is also familiar with this concept: all thoughts and actions have temporal as well as eternal consequences. Biblically, this is the law of sowing and reaping. Small errors in calculation an engineer might make in a bridge design could prove disastrous, whether the error was unintentional or not, factual or procedural, or for whatever other reason. Properly accomplished, a safe structure results and people cross formidable obstacles with safety and sometimes thoughtless ease.

Northside Christian School, with much prayer and deliberate care, employs faculty and selects curricular materials with the specific purpose of teaching mathematics from this Biblical perspective.