

## Where is God in the math classroom?

As a Christian educator in mathematics, how is my classroom different than that of the public school or university down the road? Maybe I should ask the question in another way. *Is my classroom different?* My answer to this question has always been “Yes, my classroom is different because it is distinctively Christian.” In recent years I have questioned myself on this. What makes it distinctively Christian? Does my classroom reflect *integration* or *compartmentalization* of my faith and mathematics?

When I first began teaching, I knew in the back of my mind that what I taught was no different than secular institutions. Math concepts do not change from school to school. The fact that  $2+2=4$  is the same in the public and the religious school; however, I comforted myself in the fact that it was my view of the student, classroom practices, and relationships that made my classroom “Christian”. The math was the same, but the atmosphere made my classroom distinctive. As I have worked to more fully integrate my faith, I have come to believe that this view limits the possibilities for integration. Math is not neutral. As a Christian educator, I have come to see that there are more opportunities to integrate faith in mathematics than I once believed. Harold Heie, senior fellow at the Center for Christian Studies at Gordon College, has so aptly stated that if God is the Creator of all that is true, there ought to be connections between our faith and math.

One way that I have found to make connections is to begin the year with essential questions. Examples include: Where does math come from? Is math created or discovered? What does God reveal to us in math? What role does man have in math? How are Christians to use math? Starting with essential questions grounds the entire course in its place in God’s creation. Unfortunately, many students see mathematics as a set of hard to reach, abstract rules with little meaning in their daily life. The framework of essential questions allows the instructor to reflect on an elegant solution or beautiful pattern as more than a coincidence, but an opportunity to learn about the beauty and organization that God has built into mathematics. In this manner, math is another vehicle through which we can learn about our Creator.

In the high school classes that I teach, I have found that I can ask significant questions. This is evidenced in my teaching of rates. In the past I demonstrated several examples using the typical questions of inches per year, miles per gallon, etc. I have found that a better way to teach rates is to ask the class to estimate the number of seconds per life the average student will spend in church. If I stopped here, I have simply baptized the public school examples with religious language. Students, however, are impressed by the large number and often respond with, “That’s a lot!” It provides a perfect lead into questions such as, “What if we calculated the number of seconds playing basketball, or listening to music?” You can complete the question with the students’ favorite pastime. Or, “If God examined your calendar, would it be clear to Him who is number one in your life?” Through these discussions, students often recognize that we worship God in other places and ways that are not accounted for in our estimation including working and even sitting in math class. The beauty of a significant question is that it has the potential to evoke a heart response in students.

Math history can also be a vehicle to integrate faith and mathematics. For example, when teaching the Pythagorean Theorem; students love to hear about the Pythagoreans' strange practices and their worship of numbers. It is an ideal time to share how the Pythagoreans distorted reality by worshipping the created (numbers), instead of the Creator (God). Worshipping numbers led to a crisis for the Pythagoreans when one of their members discovered an irrational number using the Pythagorean Theorem. This discovery upset the group so much that it is believed that they either killed or exiled the discoverer. Students are shocked to hear the extreme measures the Pythagoreans took to protect their worship of numbers. It provides the teachable moment to ask, "You do not worship numbers, but is there something that is out of balance in your life? Are you worshipping the created instead of the Creator?"

These are just a few suggestions for Biblical integration. The possibilities are limited only by your imagination. As Galileo noted, "God wrote the universe in the language of mathematics". From the patterns of seashells to pinecones and the ocean waves, God has covered creation with his mathematical fingerprint. The number of ways to teach lessons and demonstrate mathematics in creation is infinite. This points to another aspect of God that we can learn from mathematics, as he is infinite as well.