



Cornell University
Department of Mathematics
MATH 5080 – Mathematics for
Secondary School Teachers



**NYS Master
Teacher Program**

Mathematics Professional Development (all sessions will be held via Zoom)

January 29, 2022 ◆ **9:00 am – 2:30 pm**

9:00 – 9:20 am **Welcome & Overview**

9:25 – 10:55 am **Facilitating Student Curiosity and Engagement Through Questioning**

Toni Gamils (Teacher Center of Central Westchester)

As teachers, we know that creativity is key to student engagement in mathematics. In an active learning environment, teachers facilitate student learning through the questions they ask students. But not all questions promote critical thinking from our students. In this session we will focus on the reasons we should encourage questions from students, common mistakes teachers make in questioning students, and assessing the cognitive rigor of the questions teachers ask. I will also focus on ways to encourage students to ask high-quality questions about the content they are learning.

11:00 am – 12:00 pm **Scissors Congruence**

Inna Zakharevich (Cornell University)

Suppose that you have a triangular pyramid that you're trying to build out of styrofoam. You calculate that it should have a volume of 125 in^3 . So you go to the store and buy a 5 in x 5 in x 5 in block. Using your trusty saw (which can only make straight cuts) and some glue, can you make your pyramid? In this session we will discuss this problem, its hundreds of years of history, and its solution.

12:00 – 12:50 pm **Lunch Break & Discussion**

12:50 – 2:20 pm **Coding in the Math Classroom**

Fred Deppe (Ithaca High School)

It seems that coding is becoming more and more important all of the time. In this session we will discuss how and why we can incorporate coding in the mathematics classroom. We will discuss some basic programming concepts, look at some high school math assignments that incorporate coding, share thoughts on the subject, and plan future assignments and/or activities that weave coding into the high-school mathematics curriculum.

2:20 – 2:30 pm **Wrap-Up**

Registration: https://cornell.ca1.qualtrics.com/jfe/form/SV_1YvphG6gHUopguq

Registration Deadline: January 27, 2022

Questions? Contact Mary Ann Huntley (huntley@math.cornell.edu)