



Cornell University

K-12 Education and Outreach, Mathematics Department

MATH 5080

Mathematics for Secondary School Teachers

November 20, 2010

9:00 am – 2:30 pm

406 Malott Hall

8:45-9:00 **Welcome** (juice and bagels provided)

9:00-9:15 **Introductions**

9:15-12:00 **Social Justice in Mathematics**

Caline Khavarani (Ithaca High School) & Lee Kaltman (DeWitt Middle School)

What is “social justice” in mathematics? This workshop will focus on how we can make math education more meaningful and relevant to our students. During this presentation you will have time to revise some of your own mathematics lessons to incorporate social justice ideas. Optional: Bring some lesson plans (or ideas for lessons) that you would like to rethink and a laptop.

12:00-12:30 **Lunch** (provided)

12:30-2:20 **Geometry: Three Dimensions are Back!**

Robert Connelly (Cornell University)

Due to the forthcoming new curricular requirements (the Common Core State Standards) and common sense, it is a good idea to promote the understanding and inspiration of three-dimensional geometric objects in the classroom. Two of my favorite subjects will be presented.

1. Calculating the area of a spherical disk and its relation to equal-area projections of the world. (This has a very small calculus component.)
2. Fair dice: How to make them and why they are fair. We will build a wide variety of examples of highly symmetric three dimensional polyhedra that are provably fair. Question: Can you build a fair die with an odd number of equally likely outcomes when rolled? (This should be accessible for all grades.)

2:20-2:30 **Wrap Up**

Contact Mary Ann Huntley by Wednesday, Nov. 17th if you plan to attend.

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