

## SCI 199Y: Random Walks and Mathematical Discovery

### Discussion questions, week 4.

You have read the four-page excerpt from the NCTM “Standards”; the two-page excerpt from “Calculus” by D. Hughes-Hallett et al.; and the brief statements about mathematics by T.M. Rassias, G. Polya, and I. Stewart.

You will be put into a group of about 4 students. As a group, discuss the following questions.

1. What are the goals of the movement to reform school-level mathematics (as typified by the NCTM Standards), and of the calculus reform movement (as typified by the attitudes expressed in the Hughes-Hallett book)? (List as many as you can.)
2. What general attitude about the nature of mathematics is expressed by the three brief statements (by Rassias, Polya, and Stewart)?
3. Are the goals of the reform movements (from Question 1) consistent with these attitudes about mathematics (from Question 2)?

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### **Assignment for next week:**

Read the (five-page) article “Using cooperative learning to teach statistics”, by L.V. Jones; and also the (six-page) excerpt from “I want to be a mathematician”, by P.R. Halmos. Be prepared to compare and contrast the teaching methods described in these two studies.