

## SCI 199Y: Random Walks and Mathematical Discovery

### Discussion questions, week 9.

You have read the excerpt from “Surely you’re joking, Mr. Feynman”, by Richard P. Feynman (a Nobel Prize-winning theoretical physicist), and also the excerpt from the interview with David Blackwell (a world-famous theoretical statistician).

Working on your own, consider (and make notes about) the following questions.

**Question #1.** What common attitudes do these two mathematical geniuses both express towards mathematical research?

**Question #2.** Are any of these attitudes surprising? Why?

**Question #3.** What is Blackwell’s opinion of proofs by contradiction? What general observations can we make from this?

**Question #4.** What (if any) are the implications of all of these considerations for mathematics education?

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**Assignment for next week:** Read the excerpt (i.e., Chapter 3) from “The psychology of learning mathematics”, by R.R. Skemp. Also, at least “skim” the four-page excerpt about prime numbers and cryptography from “The Mathematical Tourist”, by I. Peterson (a former U of T undergrad!).

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In case you’re interested, here are a few Math Education sites on the World Wide Web:

The U of T Mathematics Network. <http://www.math.toronto.edu/mathnet/>

The Math Forum. <http://www.forum.swarthmore.edu/>

Mathematicians and Education Reform. <http://www.math.uic.edu/MER/>

Extend. <http://www.stolaf.edu/stolaf/other/extend/>

History of Mathematics. <http://www-groups.dcs.st-and.ac.uk/~history/index.html>