Guiding principles

IF YOU ASSUME CONTRADICTORY AXIOMS, YOU CAN DERIVE ANYTHING. IT'S CALLED THE PRINCIPLE OF EXPLOSION.

HEY, YOU'RE RIGHT! I STARTED WITH $PA^T P$ AND DERIVED YOUR MOM'S PHONE NUMBER! THAT'S NOT HOW THAT WORKS.

WAIT, THIS IS HER NUMBER! HOW-

MRS. LENHART?

HI, I'M A FRIEND OF-- WHY, YES, I AM FREE TONIGHT!

NO, BOX, LINE SOUNDS LOVELY!
Any issues arising in your current teaching?
**Guiding principles**

(in contrast to details on implementing those principles, to be discussed in coming weeks)
1. There is no single best way to teach mathematics.

- Students have different learning styles.
- Instructors have different strengths.
- Instructors should adapt to their present audience.
- Reform v. traditional

OK, then why are we bothering with this seminar?
2. What we do in the class matters.

- Most of us were going to succeed in mathematics *in spite of* the quality of our mathematics instruction.
- That is not the case with most of our students.
3. The foundation of good teaching is *respect*, for ourselves and for our students.

- Believe that you are the mathematical expert in the room.
- Accept the students where they are in their mathematical training (after verifying that they have a reasonable chance of success in the class).
- Understand that the students are taking other classes and have other life responsibilities.
- Show up, and start and stop on time, even if students do not always do the same.
4. **Prepare.**

- A little goes a long way.
- Shows respect.
- Models behavior as a student and a mathematician.
5. Be clear.

- Project your voice, write deliberately, don’t erase it immediately.
- Don’t waste their time in class. “Will this be on the test?” It could be, if you’re spending time on it.
- Conversely, don’t expect them to invent new mathematics in order to succeed on a test.
- Tell them what you are going to tell them, tell them, and then tell them what you told them. (Agenda, wrap-up.)
- Ask for questions and mean it.