

Teaching Math 30

Anyone who teaches a mathematics course, and particularly Math 30, should be doing all of these things:

- Use a variety of resources to obtain examples for the lessons. These could include textbooks, practice workbooks, old exams, or on-line lessons. Teaching strictly from one source is not as effective.
- Know the curriculum. It's OK to go beyond what's expected once in a while, but make sure students know what material is 'required to know', and what isn't.
- Use the principle of 'starting simple'. Begin each new lesson with lots of easy examples. Work gradually toward the more difficult ones, and *identify* which ones are difficult, so that students who are struggling can bypass them when preparing for a test. Remember that most resources do not give enough examples, which is why you need to supplement them with others.
- Allow extra class time for lessons on difficult topics. Make up the time on easier ones.
- Prepare solutions to the lesson examples in advance, so that you know how to solve them without thinking about them. This lets you spend more of the lesson time making sure students are understanding the material.
- Provide answers to all assignments, with completely worked solutions if possible.
- Check student work frequently, one-on-one, so you can identify the errors they are making, and provide remediation when necessary.
- Use formative assessment techniques to make sure that most students are ready for the test before you give it. 'Keeping on time' isn't important if students aren't going to pass.

- Allow students to try Unit tests again if they have difficulty ... all Unit tests, and as many times as they want. Yes, this is a lot more work for the teacher. But it's worth it.
- Allow sufficient time for preparation for tests, and be available outside of class for help. Test review questions should be a close match to what will be seen on the Diploma exam.
- Provide after-school intensive review sessions for the longer, more difficult units, well before the final exam.
- Make sure the tests are fair, with the proper balance of 'easy' and 'difficult' questions. Tests should be thorough. Missing one question should not result in a drastic drop in a student's mark on that test.
- Your term mark should be composed entirely of objective unit tests. Formative marks are for you to adjust your teaching.