

**PROFESSOR:** Hi, I'm Gilbert Strang, and I'm a math professor at MIT. And I hope these highlights of calculus will be helpful. I started the project this year, because the linear algebra lectures which were in class have been watched by a lot of people on OpenCourseWare. And so I looked at what there was for calculus.

And I saw two or three types of things. One was lectures, sort of very serious, too mathy. And another was supported by foundations, an effort to make math look so terrifically exciting and wonderful and connect with everything. And yet, I feel a lot of people are taking math courses, calculus, in high school, in college, and simply want a little help to see what's the main point.

And maybe that's the idea of these lectures, is to try to tell you the main point without all the heavy things that a giant textbook would do, and without all the practice that you'll get in class, and doing exercises and so on. So these are kind of short, but I hope alive. And if they help, I'm very happy.

So I guess I'm hoping everybody might watch this who'd like a little help or a second look at calculus, both high school and college students. I wanted to capture key ideas that you could use for review and see new examples and see just coming from a second person. That seems to be what succeeds with linear algebra. The videos are sort of just to add, to supplement what you're actually seeing in class and in the textbook.

I think of the textbooks as often so large and so many exercises that it's totally easy to lose the key point, what's essential about calculus and what is just kind of routine and practice. So in short videos, it has to be the essential points, the three groups of functions, like powers of  $x$ , sine and cosine of  $x$ , and  $e$  to the  $x$ . If you understand those, you've got the main ideas.

We're starting out with a first group of five videos. Maybe big picture is the words that we think of for those. And then that'll be the first group that'll be on OpenCourseWare. And then I've done 12 after that, that do sort of the rest of differential calculus, big words just meaning how to find the derivative, the slope, the speed. You'll see in the videos. And then after that could come integral calculus, if you think I should.

I don't think of a lot of prerequisites for these videos. I guess I'm always hopeful that you could watch them even if you haven't started calculus, to see what's coming, what it's about. I've taught math for a long time, and it's so easy to get into the course and jump over the opening,

the introduction that tells what's important here. And that's maybe what these videos are aimed at.

**FEMALE**

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**SPEAKER:**

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