Okay, onto actual content and this time I’m armed with a pen .

Okay, Expressions allow us to express computation in programming languages. So an expression is something that describes some piece of computation and evaluates to a value. Both of these are important. So expressions are older than computers.

Mathematics contains all kinds of expressions

But mathematicians invented tons of different ways of writing things down.

So, when you want to add in math you put a plus sign in between the two things you want to add. But division’s totally different. You put something above and something below a horizontal line.

Square roots involve putting a number in a little house.

Taking the sine of an angle , you usally write “sin” instead of “sine” because apparently the “e” takes too long to write. And there are all of these other kinds of mathematical notation people have developed over years. Well it turns out there’s just one type of expression to rule them all, and that’s the function notation. That’s one that computer scientists use because it’s a generalization over everything else. So all expression can be expressed using function call notation like f(x). Okay, enough slides, let’s take a look

So I’m going to start up Python here, and I’ll show you that what Python does is it waits for you to type in an expression. We’ll type in 2013, and it’ll evaluate that expression.

Expressions describe computations and they have values.

And in this case 2013 just evaluates to 2013.

But we can do fancier stuff than that. We can add together 2000 and 13.

It does addition. We can even add together multiple things at the same time . Maybe do a little multiplication in there, and super quick Python’s going to do the math for us.

Okay, so it’s capable of using what we call infix operators which are things like times and plus where you put the arguments to those operators on the left and the right, because that’s just mathematical convention but most of what we’re going to write in this course uses what’s called function call notation. So that means writing down the name of function and then the arguments of that function