Do you have any questions about the quiz?
Large inheritance hierarchies tend to be very brittle. It becomes basically impossible to edit anything at the top.
What is the purpose of generics?
What is the syntax of generics?
What are enums? Did you cover enums in PAD1?
How is the Java version different from the C version?
What is the syntax of Java enums?
What are inner classes? What makes them special? What types of inner classes are there?
What is the syntax of inner classes?
It turns out that our little MathFunction interface makes a perfect supertype for creating inner classes.

We can demonstrate this by thinking of how we can create functions from other functions. Let's come up with a few of those and write code to do them.
The MathFunctions can be fun, but they are a bit limited because they can only work with doubles.

Using generics we can create a type that represents a more general type of function that maps from one type to another.

How can you combine these more general types of functions?
How did you represent a string in C? How do we represent a string in Java?

Let's go look at the API for String to see what the Java developers have provided us with.

Strings are immutable so it is very inefficient to build big strings from a lot of little pieces. If you need to do that, use StringBuffer.

It is the only class with an overloaded operator, + for string concatenation.

Functions that looks they mutate the String return a new String instead.

To get a single character, use charAt.
Array syntax in Java is just like it was in C as far as using the arrays. There are significant differences though.

- Array types are made by putting [] after a regular type.
- Array types are object types so your variables are references and should be instantiated with new.
- Arrays have bounds checking and know their length.
- You can't make arrays of generics.
Write the following method:

- `String replaceAll(String s, char f, char t)`

This method should return a new string where all instances of `f` in `s` have been replaced with `t`.

The design for assignment #2 is due in a week.