







Welcome

Getting Started with BlueJ

Variables and Mathematical Operators

-  Let's learn some basic Java syntax! 1 min
-  Shapes: Collections of Points 2 min
-  Why Semantics: Motivation to Read Code 1 min
-  Variables 2 min
-  Mathematical Operators 2 min
-  **Practice Quiz:** Variables and Mathematical Operators 3 questions

Functions and Conditionals

Classes, Types, and For Each Loops

Seven Steps for Solving Programming Problems




Understanding Code

- Java classes Shape and Point
- What can these classes do?
- How would you the code on your own?
 - Need to know **semantics** of code
 - Fancy word for meaning

That is, what are the semantics or meaning of each part of the code?

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Why Semantics: Motivation to Read Code



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Okay. You will be using the Java classes Shape and Point, but what will you be able to do with these classes? Well, in some ways, you know the answer to that. You will be able to draw shapes or calculate a shape's perimeter, but just knowing what a Java class or script could do does not mean you understand it. So the question we are going to answer now is, how would you understand what this code does by yourself? [That is, what are the semantics or meaning of each part of the code?](#) Understanding the precise meaning of code is important because you can't write code without saying precisely what you mean. When we talk about understanding the semantics of code, what exactly do we mean? We mean how would you execute the code by hand with nothing but pencil and paper? This skill is very important for a couple of reasons. First, it's how you understand code well enough to write what you mean. Second, when your code does not behave as you expect, how do you figure out what is going wrong? You need to understand what it does, and this gives you the skills to do that.

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